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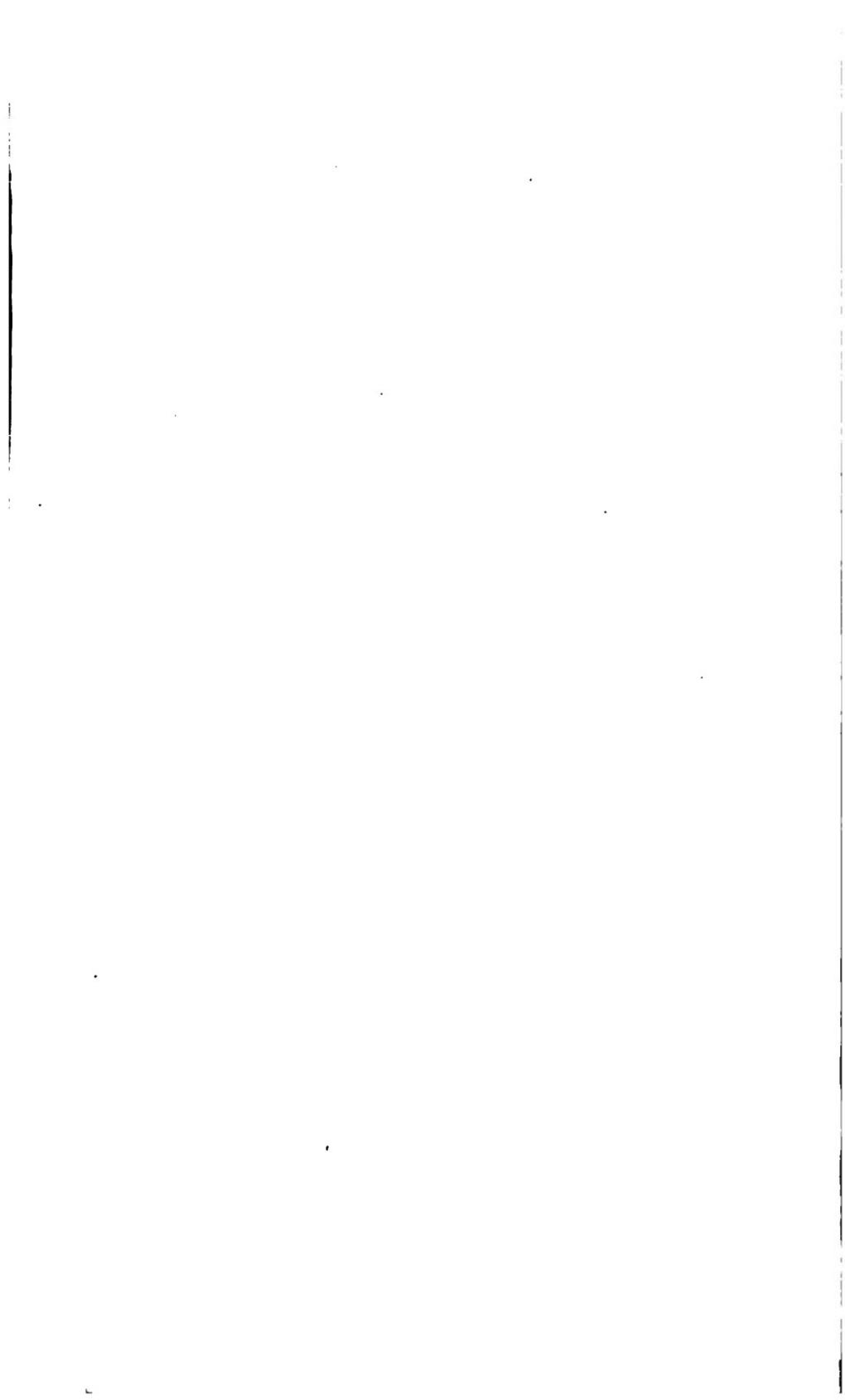
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THE

**QUARTERLY**

**JOURNAL OF EDUCATION.**

**VOL. I.**

**JANUARY—APRIL.**

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## NOTICE.

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THE Committee of the Society for the Diffusion of Useful Knowledge are desirous of explaining the degree of superintendence, which they think that they ought to exercise with respect to this publication.

It will of course be their duty not to sanction any thing inconsistent with the general principles of the Society. Subject, however, to this general superintendence, they feel that the objects of the Society will be better forwarded by placing before the readers of this work the sentiments of able and liberal men, and thus enabling them to form their own conclusions, as well from the difference as from the agreement of the writers, than by proposing to them, as if from authority, any fixed rule of judgment, or one uniform set of opinions. It would also be inconsistent with the respect which the Committee entertain for the persons engaged in the preparation of these papers, were they to require them strictly to submit their own opinions to any rule that should be prescribed to them. If, therefore, the general effect of a paper be favourable to the objects of the Society, the Committee will feel themselves at liberty to direct its publication: the details must be the author's alone, and the opinions expressed on each particular question must be considered as his, and not those of the Committee. As they do not profess to make themselves answerable for the details of each particular essay, they cannot, of course, undertake for the exact conformity of the representations which different authors may make of the same facts; nor, indeed, do they, for the reasons already given, feel that such conformity is requisite.

By Order of the Committee,

THOMAS COATES, *Secretary.*

*Gray's Inn,  
28th Dec., 1830.*

THE  
QUARTERLY  
JOURNAL OF EDUCATION.

---

INTRODUCTION.

THE Committee of the Society for the Diffusion of Useful Knowledge have hitherto not made known their object in publishing a Journal of Education any further than by a general statement of its nature and design : but the appearance of the first number presents a suitable occasion for explaining more clearly their views, and for pointing out the important advantages which education may derive from being made the subject of periodical discussion.

While we have in Great Britain various means of diffusing the knowledge of all the events of political life, and of every useful discovery in art and science, there are none that are efficient for recording the great and interesting events of Education, and for communicating the improvements which are made from time to time in the modes of acquiring knowledge.

The education of the British islands has no bond of union ; it is split into factions, and parties, and sects, each ignorant of what the rest are doing, and all deprived of the benefits which they might derive from mutual acquaintance. Education may improve in some places ; in others it may be remaining stationary, or gradually growing worse ; while, except to a few, whom chance may have led to examine establishments for education, these important facts in their history are unknown and unrecorded. Is it necessary to allege a stronger proof of this than the general ignorance which prevails about the constitution and discipline of the two ancient Universities of England, even in those classes which have free and open access to these seats of learning ? How few of those who have not been educated there, know what branches of knowledge are taught or neglected ; or what are the peculiar merits and defects in the systems pursued at Oxford and Cambridge, to say nothing of the Scotch Universities, hardly allowed to bear the name in this country : and how few even of the gra-

duates of an English University can form any comparison between that system under which they have been trained, and the education of such places as Bonn or Berlin.

Now, if we can devise any means for giving a greater unity to education in these islands ; if we can only make all persons engaged in instruction better acquainted with one another ; and if we can diffuse a fair and unbiased criticism on establishments for education, and on the systems and the books which constitute their real life and existence—we are doing a service, not only to our country, but to the whole world. *They* are the true friends to social order and rational freedom ; *they* deserve an honourable mention and an honest fame, who labour to diffuse useful knowledge among all men, offering to each as large a share as his time, his circumstances, and his capacity will allow him to acquire.

A Journal of Education will comprehend a greater variety of important subjects, and more topics of general interest, than those imagine who have not attempted an enumeration of them.

Every civilized country abounds in establishments for the instruction of the various classes of the community ; some founded by a wise and generous state policy ; others by the endowments of friends to education ; and a large number owe their origin to individual speculation for profit, sometimes combined with a desire to improve education.

All these descriptions of places of instruction, and every single establishment among them, have a constitution, a history, and an influence on society, only not properly estimated, because we have in general no ready means of knowing and making known their transactions. But it is from such places that those proceed, whose acts and opinions must determine the character of our social life ; for *they* are the *educated*, and be the education good or bad, it *will* have its influence.

To describe then the origin, constitution, and actual condition of places of education ; to examine their systems of instruction, and to record the important events from time to time occurring in them, is the object of one part of this Journal. Though the institutions of our own country fairly demand the greater part of our attention, it is of almost equal importance to show what is going on in foreign parts, and to introduce to early notice the improvements of Germany, France, and other continental nations. It will often be found necessary to give an historical sketch, beginning at the remotest well known era, of those important University systems or great schools, which have been so closely connected with the history of national education. The University of Paris deserves such a notice, which would furnish matter for the consideration of

thinking readers, and would have also the advantage of some attraction for those who read only for amusement. In treating of those venerable and useful institutions, both at home and abroad, while it becomes a sacred duty not to conceal their defects, it will always be our delight to mention even those defects in courteous and respectful terms. A rich mine of curious and useful information, in this department of our plan, is contained in the very voluminous Reports of the Commissioners of Public Charities in England, and some interesting matter is also to be found in the Reports of the Irish Education Commissions. From these stores we shall occasionally draw such historical and other matter as may prove at once instructive and agreeable to those who interest themselves in the history of endowed schools.

In obtaining information on establishments for education, it will always be the object of the Committee to procure the assistance of gentlemen who are personally acquainted with them, and on whose character and discretion they can rely. Such contributors, it may be said, when they are professionally connected with public schools or universities, will be inclined to set off their merits to most advantage, and to palliate their faults. But there is an obvious advantage in making choice of a person familiar with the place described—he knows the facts, and he is, therefore, a safer guide than one who may be liable, from ignorance of them, to draw a false picture, or, from prejudice, to see them in a false light. And if, besides knowing the facts, our contributor is a person in whom we have full confidence, we have as much security as is practicable against misstatement or error. It should be added, too, that the Committee contains, among so great a number of members, many whose judgment and knowledge will form an additional check on any wilful or accidental perversion of facts. This explanation appears to be necessary, to obviate any misconception about the precise object of this part of the Journal, and the way of accomplishing it.

For the purpose of explaining more distinctly the kind of information which the Society wish to collect, a Schedule, containing heads of inquiry, is subjoined to these introductory remarks.

Another, and about an equal portion of the Journal, will be devoted to the examination of books used in practical instruction. If we consider how important it is, both for teacher and learner, to have some means of judging of the quality of those instruments which they must daily employ, it will be readily allowed that a fair and complete review of a book is one of the most effectual ways of improving Education. That it may

be difficult to secure a constant supply of well written and impartial examinations of books is no real objection to making the attempt ; and the Committee can at least promise, that they will endeavour to conduct this part of the Journal in such a way as to make it a safe guide to those who consult it. They will, without reserve, point out errors, of whatever kind they may be, in all those works which they may think it useful to examine ; but, on no occasion, shall any contributor be allowed to indulge in personal abuse, or to wander into the vague generalities of praise and censure, so frequently substituted for real criticism. In some cases a simple and easy course will render harsh censure unnecessary : when a work is of no value, and has no great circulation, no notice will be taken of it.

One more remark is necessary to prevent misconception of the Society's views. The contributors to the Journal are necessarily selected from persons of various classes and professions, whose opinions will unavoidably differ on many matters of detail, and also occasionally on some points involving general principles. That the Committee should require all such contributors to agree, or that they themselves should undertake to adapt all the papers for the Journal to one standard of opinion, is obviously impossible ; and, it may be added, not at all consistent with the nature of the Society's Constitution. Within certain limits, the Committee think it useful to allow contributors a free expression of their views, but they do not, therefore, consider themselves responsible for every opinion, nor liable to a charge of inconsistency for allowing their contributors to differ on subjects which are still open for discussion. By giving their sanction to each number of the Journal, they mean to say that the papers which it contains on the *whole* meet with their approbation, and they publish them because they think their *general* tenor calculated to do good. The standing notice on the inside of the cover expresses distinctly the opinion of the Society on this subject.

The short notices at the end of each Number are intended to communicate information on a variety of smaller matters, which could not be introduced anywhere else. They may be partly classed under the head of News, though it should be understood that they will be selected from domestic and foreign journals, rather with a view to their usefulness than their mere novelty.

As the Journal of Education is a very comprehensive title, it may be asked if it is intended to give a preference to any particular branch of the subject. The present Number will in

part answer the question, but not entirely ; for, on future occasions, subjects will be discussed, and books reviewed, belonging to classes different from any that the present Number contains.

But there is no education of any country or class in society which is not included within the limits of the scheme; and there is no kind of book, either used in the most elementary instruction, or in the higher departments, which the Committee may not occasionally notice. Works on religious subjects are of course excepted, it being well known to all who are acquainted with the constitution of the Society, that they have thought it better to leave this important part of education to the care of those numerous Societies which are established for the promotion of Christian knowledge, and which so ably and conscientiously fulfil their duties. It is the opinion of the Committee that the general education of those classes of the community, who, from their station in society, have the control over that of the poorer classes, is the most important object to which they can direct their attention. They do not intend to neglect either the statistics of the education of the poorer classes, or the books which are used for their instruction, nor any other fact of any kind that concerns so large a part of the population. But the education of that class, on which depends the education of all the rest, demands their especial attention.

In our universities, and schools for the instruction of the richer and the moderately wealthy classes, there is room for much improvement in that which is already taught, and there is an immediate necessity to add to it other kinds of knowledge which are much neglected. It will, therefore, be one of the most important objects of this Journal to improve the higher kind of education by an impartial criticism of such books as are used in public schools and colleges. And, in doing this, it will often be in the power of the Committee to introduce new and useful works to the notice of British teachers, and to recommend additional branches of knowledge by showing what is taught in foreign schools and universities. This is the more necessary, because, for the present, the improvement of school-books and other works used in education, though an important part of the Society's plan, has been unavoidably postponed to other objects less directly connected with general education. Occasionally, too, works of the very highest class in the department of philology, and the various branches of science, will be the subject of criticism : for it is by such works that the opinions of teachers are in many cases formed and controlled ; and there is, therefore, as much reason for endeavouring to direct the instructor in the right

way, as there is for giving so much attention to the education of the wealthier classes, with the view of securing the good education of all.

A single example will show the importance of this remark. Mitford's History of Greece, a work of great labour and of some merit, forms the opinions of a very numerous class of teachers on one subject, who, in their turn, give a direction to the opinions of those whom they instruct. Is the history of a people who have transmitted to us so much of the history of the world, such excellent specimens of art, and such simple and correct models of composition—is this history an object worthy of our careful study? We think it is; and we think too that a most vigilant, scrutinizing, and impartial criticism should watch over every undertaking that professes to exhibit the history either of a people like the Greeks, or the social progress of a nation like our own. Yet, nothing can be more certain than that Mitford's learned work is written under the influence of most extravagant opinions and deep-rooted prejudices upon all political subjects; opinions which, as those who once held them are now ready to allow, were, at the least, strengthened by the passing events of the day—and prejudices which, in the present times, have almost everywhere been extirpated.

These few remarks, aided by the sample offered in a first Number, will explain pretty clearly the general, as well as the more particular object of the Society's Journal of Education.

It is well known that in France, Germany, and the United States of North America \*, there are Journals of Education, some of which bear a resemblance in their plan to the present Number, while others differ considerably in their detail; but all unite in the main design of improving education, by making it the subject of periodical criticism, and by diffusing the knowledge of all useful facts connected with the important science of instruction.

\* There is also a Journal of Education that has been published for some years in London, under the title of 'The Sunday School Teacher's Magazine and Journal of Education.'

**HEADS OF INQUIRY.**

THE Committee of the Society for the Diffusion of Useful Knowledge, believing that many readers of the Journal in various parts of the world, and particularly in the British dominions, will be both able and willing to furnish valuable information on the statistics of education, suggest the following heads of inquiry, and request that their correspondents will communicate their names and addresses, with some indication of the authorities on which their statements depend.

1. What is the name, population, and extent of the district to which the answers to the following queries apply?
2. What are the means of education in your neighbourhood ; viz. Is there any
  - a. University ?
  - b. College or Public School ?
  - c. Establishment for the special instruction of students in Theology, Medicine, Law, and whatever is strictly professional education ?
  - d. Free School ?
  - e. Lancasterian or National School ?
  - f. Sunday School—or Adult School ?
  - g. Infant School ?
  - h. Any Association for the Diffusion of Knowledge ; such as, Literary and Philosophical Institution, Mechanics' Institution or School ?
  - i. School of Arts, &c. ?
  - j. Society for the Promotion of particular Arts and Sciences, such as Geography, Astronomy, Political Economy, &c. ?

Be pleased to specify under each head, whether the particular Institution is incorporated.

Whether it is supported by endowment of individuals, or of any religious sect, and the nature of the endowment.

Or whether by subscription, by the government, or by the fees of the learners ; or whether partly by each of those means. What the date of its origin ? And how is it governed ?

*Introduction.*

- Under the subdivisions, *a*, *b*, *c*, be pleased to specify  
Whether the Learned Languages are taught ? the Mathematics, and the moral and physical Sciences ?  
What length of time is employed in the course of Studies ?  
What examinations are there, what rewards, what punishments ?  
Number of teachers, number of pupils, rate of increase or diminution of the pupils since the origin of the institution ?  
Teachers how paid ; remuneration fixed or variable, and on what depending ? Expense for each pupil, whether paid entirely by him or in part, or paid by a society or foundation ?  
Text books, maps, &c. used, to be *particularly* specified, and expense of books per annum for each pupil, libraries for the use of teachers or pupils, philosophical apparatus, &c. ?  
In Lending Libraries for the poorer classes, state what kind of books compose them, how purchased or procured, what kind most read, whether lent gratuitously, or on the payment of a small sum.  
Circulation of periodical publications of all kinds within given districts—titles and nature of such publications to be specified.

## ON UNIVERSITY EDUCATION.

## OXFORD.

THE prevailing ignorance among Englishmen, as to the character and constitution of their Universities, is a fact not a little extraordinary. Let half a dozen of our countrymen, of average intelligence, and respectably educated, but not at a University, be asked by a foreigner to give him an account of these celebrated places of education, and it is probable that no two of their statements will agree, and that not one of them will be exempt from material inaccuracy.

Many, who are neither destitute of curiosity, nor ill informed on other subjects, some of which would seem to be intrinsically of a much less interesting character, are conscious that they know but little about Oxford and Cambridge; in reality, they know still less than they imagine, and have little or no curiosity to know more.

And many, even of those who have been educated at one of the Universities, will yet be found to have a very indistinct, as well as imperfect, notion of their nature and objects. A correct account of the actual condition of one or both of these academical bodies would contain more of real novelty to the greater part of the reading public, more information which they did not previously possess, than most books that are published; and yet, perhaps, an account of the present state of the Chinese empire would be perused with more interest.

One cause, perhaps, of this general indifference may be, that familiar *acquaintance* is usually mistaken for complete *knowledge*. Every one is accustomed to the *names* of Oxford and Cambridge; and few, therefore, are aware how little they really know about the *things*. It is taken for granted that no one can be ignorant of things 'familiar in their mouths as household words.' Add to which, that almost every one among the educated classes either has been at one of the Universities himself, in which case he is ashamed to own even to himself that he has any thing to learn respecting it; or, at least, has relations or neighbours, who have been brought up there, of whom he could so easily make inquiries, that he seldom thinks of doing so. Where no diligent research is called for,—no great discovery to be made,—

it seldom happens that much curiosity is excited ; and hence what it is supposed may be known at any time, is commonly not known at all. The remark is become almost proverbial, that those in the neighbourhood of some curious waterfall, ruin, manufactory, or other sight, which attracts numbers from a distance, seldom visit it themselves, because they can go at any time.

There is another circumstance which occasions many even of those who have had a University education, to form an incorrect and imperfect notion on the subject : they have not thought of considering what *ends* are, and what ought to be, proposed in such an establishment. Now it is obvious, that no one can take any clear and comprehensive view of the actual state of a place of education, unless he understand, first, what are the objects to be attained ; and, secondly, what are the means employed for carrying the designs into effect : and unless he be also competent to judge both how far the proposed object is a good one, and the means employed for attaining it likely to succeed. Now let any one who is boldly pronouncing on the merits or demerits of the system pursued, for instance, at Oxford, be asked to state his opinion first on the above points, and it is not unlikely that he may be found never to have even placed them distinctly before his mind.

He would find on reflection, that on each of these points many and nice distinctions are called for, which are of the highest practical importance. For instance, it is by no means sufficient, with a view to estimating aright the character of a University, to determine what things are *most essentially important* to be taught : the question still remains, what should be taught by an *endowed* body. As a general rule, it may safely be asserted, that whatever branches of knowledge directly conduce to the professional advancement and success in life of the individual, may safely be left, and had better be left, to the spontaneous exertions of individual learners and teachers. There is no need of endowments for students or for teachers of the most necessary arts of life. In a few cases some extraordinary support, at the outset, may be expedient, to give a turn to the habitual thoughts and pursuits of a people ; and a museum, library, laboratory, or other such institution for facilitating the cultivation of some branch of study, may be a fit subject of public expenditure or private munificence : but wherever, as in agriculture, medicine, the mechanical arts, &c., a man's professional success clearly depends on his real or supposed proficiency, the private interest of individuals will induce them, to the best

of their power, to seek for instruction, and to secure by the remuneration offered a competent supply of teachers.

When, therefore, a University is censured for ‘teaching nothing that is of any use,’ or exhorted to pay an especial attention to *useful* studies, a distinction should be pointed out which is commonly overlooked; *viz.*, between what is useful to each individual with a view to his own immediate support or advancement, and what is useful to society if *pursued as a system*. The latter is the proper object of an endowed institution; the former may be trusted to the spontaneous sharp-sightedness of individuals for their own or their children’s success in life.

On this principle, it has been observed, and generally speaking with truth, that those well-meaning persons who have left legacies for the apprenticing of poor boys to useful trades, have, for the most part, (except where such endowments have been bestowed as a prize on superior merit,) thrown their money away. Certain individuals, indeed, are perhaps benefited by being elevated to a situation which they would not otherwise have attained; but as the effectual demand for tailors and shoemakers is not increased by binding poor boys apprentices to those trades, the public is on the whole no gainer by such donations; they only make one person a tailor instead of another; and though the trade is a very necessary one, there is no fear of its being under-supplied as long as the effectual demand for clothes continues the same. ‘There are but so many seats in the theatre of life; and he who procures me one of them, does to me indeed a service, but none at all to the assembly.’

But is there then, it may be asked, any branch or kind of education so little likely to be adequately encouraged by the spontaneous exertions of individuals, and at the same time so beneficial to the community, as to be deserving of public support? Adam Smith seems disposed to answer this question in the negative, except as far as regards the lower orders. ‘They,’ says he, (book v. chap. i. p. 186,) ‘have little time to spare for education. Their parents can scarce afford to maintain them even in infancy. As soon as they are able to work, they must apply to some trade by which they can earn their subsistence. That trade too is generally so simple and uniform, as to give little exercise to the understanding; while, at the same time, their labour is both so constant and so severe, that it leaves them little leisure and less inclination to apply to, or even to think of any thing else.

‘But though the common people cannot, in any civilized

society, be so well instructed as people of some rank and fortune, the most essential parts of education, however, to read, write, and account, can be acquired at so early a period of life, that the greater part even of those who are to be bred to the lowest occupations, have time to acquire them before they can be employed in those occupations. For a very small expense the public can facilitate, can encourage, and can even impose upon almost the whole body of the people, the necessity of acquiring those most essential parts of education.'

But in respect to the higher classes, he observes that, ' were there no public institutions (book v. chap. i. p. 180,) for education, a gentleman, after going through, with application and abilities, the most complete course of education which the circumstances of the times were supposed to afford, could not come into the world completely ignorant of every thing which is the common subject of conversation among gentlemen and men of the world.'

He all along assumes (for he does not undertake to prove,) that for all above the lowest ranks of society, that education is the best, and is complete, which their own interests, tastes, and feelings would lead them to seek and to find, if left completely to themselves. His opinion on this point has been ascribed by many to an exclusive attention to that which is the avowed subject of his work, national wealth, and a consequent tendency to estimate the absolute expediency of every system or measure, solely with a view to profit and loss. But it is not unlikely that he was influenced in a great degree by the then degraded condition of the University of Oxford, of which he was a member; and of which it might be said with too much truth, both in his time and for many years after, that a young man was more likely to be injured than to derive advantage from a residence there.

If it was an error in him, therefore, as doubtless it was, to condemn public institutions of this kind altogether, and to overlook the important advantages to which they may be made subservient, it was at least an error, for which the existing abuse offered some palliation. It is much to be regretted, however, that while edition after edition of his valuable work is presented to the public, a large portion of his readers should be, as is probably the case, left to suppose that the description he gives of Universities generally, is applicable to them at the present day, or at least to the one from which his ideas were chiefly formed ; whereas in reality

a writer who should describe the British army as equipped with bows and arrows, would not convey a more incorrect idea.

A writer of Adam Smith's acuteness and sound judgment would hardly have failed to perceive, had he not been blinded by an indignation, certainly not inexcusable, that there is, or at least conceivably may be, a system of education befitting a *gentleman* as such, and tending to qualify him (in Milton's words) 'to perform, justly, skilfully, and magnanimously, all the offices, both private and public, of peace and war:' an education which shall cultivate the understanding and improve the heart; developing the soundest moral principles, exercising the reasoning faculty, refining the taste, and introducing the student to various branches of knowledge, intrinsically the most interesting, but liable to be unduly neglected when education is conducted on mere computations of immediate profit and loss. Nothing is more to be deprecated than the universal pursuit (so strongly advocated by some), in each instance, of a strictly 'professional education;' such as tends to strengthen the barrier which the necessary division of labour always, in some degree, places between man and man; and to confine every one, as far as possible, as it were, to his own workshop, without allowing all 'to walk abroad and recreate themselves' in the pleasant gardens of literature and science. The first and main object of a University should not be professional education in the narrowest sense, *viz.* that which helps a man to *get on* in his profession, but that which qualifies him to adorn it—to be a better companion, a better citizen, and a better man.

And of what may be called professional education, those parts are surely the most worthy the attention of an endowed public establishment, which private interest would be the most likely to overlook, in consequence of the less close connexion between an individual's qualifications, and his success in life. In this predicament are two of the most important professions (though to one of them only this term is commonly applied), that of a minister of religion, and that of a legislator. In the former of these, indeed, a candidate is obliged to undergo a regular examination; but this, at the best, can seldom do more than exclude those obviously *unfit*: in neither of these walks of life does each man's success depend, in near the same degree, on his qualifications, as in the medical or legal professions.

That education, therefore, which is the most useful on public grounds,—the best to be pursued as a system,—and

the most suitable to a University, should seem to be that which, while it affords general cultivation of mind to all, whether designed to be private gentlemen, or members of any liberal profession, bestows especial attention on those points which are connected with civil and religious affairs;—points *professionally* concerning those who are to hold office in Church or State, but with which, in a Christian country, and under a free government, none can be *unconcerned*.

How far these views were adopted by the founders, reformers, and conductors, at various times, of our University system, cannot with any certainty be ascertained: but the system itself, both in its earliest form, and under its various modifications, seems to indicate that something of this kind was in the minds of those who had the regulation of it.

Without entering into antiquarian researches, or into such minute details as would, to most readers, be uninteresting, it may be sufficient to remark that there has always been a distinction between degrees in *Arts* and in the *Faculties*; the former having reference to a course of study which, in most instances, is required as preliminary, and which may be properly called unprofessional. So far is Adam Smith's notion from being correct, that the Universities were ecclesiastical establishments, and designed for the education of the clergy. The degrees in Arts are reckoned two; the higher, which is that of M. A. (Master of Arts), requiring a course of (supposed) study of seven years; the same time which (probably from a fanciful preference of the number seven) was required in an *apprenticeship* to any trade; to qualify a man to set up as a *master* carpenter, shoemaker, &c., i. e. as an instructor in the particular *art* which he is supposed to have sufficiently acquired. In the same manner, a Master of Arts is supposed qualified to give lectures in arts; and the ceremony of conferring the degree consists in a formal admission of him to that right. Four years, kept according to rule, are required of a candidate for the inferior degree of Bachelor of Arts, which is, in fact, the only degree taken by the majority. But previous to this, there is, virtually, though not in name, another degree, that of Sophista Generalis, vulgarly 'Sophs,' to which a candidate may be admitted, under the existing regulations, after passing the requisite examination, in his second year.

In the faculties, the highest degree is that of, not Master, but Doctor, which seems, in etymology as in practice, equivalent to it. The inferior degree in these, as in arts, is that of Bachelor. For the degrees of Bachelor or Doctor of

Civil Law the candidate is not required, as in Theology and Medicine, to pass through Arts, as it is called, *i. e.* previously to take his degree of M.A.

Not a few, probably, who have been educated, and have graduated in Arts at Oxford, would be at a loss if asked *what* the arts originally were, and how many, from which the degrees of B.A. and M.A. take their designation. The favourite number seven again appears in this distribution: the arts were divided into the *trivium*, consisting of—1. Grammar; 2. Logic; 3. Rhetoric;—and the *quadrivium*, comprising—4. Music; 5. Arithmetic; 6. Geometry; 7. Astronomy: and these seven liberal arts (answering to the seven cardinal virtues, seven deadly sins, seven sacraments, &c., &c.) were enumerated, according to the practice of the times, in these memorial lines :

Gram. loquitur; Dia. vera docet; Rhet. verba colorat;  
Mus. canit; Ar. numerat; G. ponderat; A. colit astra.

There is, however, an anomalous circumstance connected with one of these arts, Music; distinct degrees of Bachelor and Doctor being conferred in that art, which is not the case with any of the others. There are generally two or three graduates in Music on the books, but they are not, as such, members of convocation.

For all degrees, whether in arts or in any of the faculties, candidates seem originally to have been required to obtain the approbation of the *highest Graduates* in each department respectively\*; and to have been examined by them for that purpose in various ways, according to the regulations established from time to time. And virtually this system now subsists, in respect of the degree which is now of the most substantial importance, that of B.A.; the examination for that degree, and for the preliminary step to it, that of Soph, being conducted by certain Masters of Arts selected and approved by Convocation, and who may be regarded as exercising the functions of representatives, as far as that business is concerned, and deputies of the whole body of Masters. The ancient mode of trying a candidate's proficiency by public disputation is exchanged for one more conformable to modern manners; the Masters examine him, both orally and on paper, by questions and passages of authors to be translated. The candidate who satisfies them obtains from them a certificate to that effect; and also (in the second of these two examinations, that for the degree of B.A., and not in the

\* Viz. Masters for degrees in Arts, and Doctors for any other.

former, called the *Responsions*) he has his name enrolled, if deserving, in a register of honour, consisting of different Classes. Should the candidate fail of obtaining any testimonials from the examiners, it passes in silence, and he is at liberty to present himself at a subsequent examination

For many matters of detail, which some may be curious to know, the Oxford University Calendar ought to be consulted.

In the next Number it is proposed to give some account of that which cannot be learned from a Calendar, viz. what is the actual state of the University of Oxford as an engine of education, and what improvements, or supposed improvements, in the system, have been or may hereafter be suggested.

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#### ELEMENTARY INSTRUCTION IN SCOTLAND, THE UNITED STATES, SILESIA, BAVARIA, &c.

THE advantages resulting from the instruction of all classes in the elementary branches of education seem now to be pretty generally admitted. There is, however, a very great diversity of opinion among the most zealous friends to public instruction, as to the best mode in which it should be afforded. Some object altogether to the interference of government in the matter: they contend that the public should be left to supply themselves with instruction, as they are left to supply themselves with the various necessities and conveniences of life; and that, if it be really as useful as is represented, the vast majority of individuals will make a point of securing its advantages to themselves and their children. Others, again, contend that this is one of those cases in which governments should interfere to assist the efforts of their subjects in bringing about a desirable result: they argue that, though schools may be established in cities and populous districts, from a sense of their advantage merely, without any public encouragement, yet that, in pastoral or agricultural districts, where the population is comparatively thin, if there be no public schools, the children of those only who can afford to keep a tutor, or who can themselves perform his functions, will be educated; and as such individuals bear, in all cases, a very small proportion to the total population, it follows that the great mass of the inhabitants of the districts in question would, under the circumstances supposed, be totally uneducated: they further

argue that the poor are but too apt to undervalue education; or at least to postpone it for more sensible objects ; and that, where the competition for employment is so intense as in most countries of Europe, if it be neglected in the earlier period of life, the deficiency can rarely be supplied at any subsequent period. An endless variety of additional arguments has been produced on both sides ; but though the question be not free from difficulty, we are inclined to think that they are right who argue in favour of the policy of establishing a universal system of elementary instruction by authority of government. This, as it appears to us, is the only means by which the benefits of a well-digested plan of instruction can be completely diffused throughout the country, and brought home, as it were, to the door of the poor man. It is idle to suppose, as many have done, that private benevolence will ever fully supply so great a desideratum, or that it will be able to furnish the poor, either in cities or country districts, with that solid and really useful instruction of which they stand so much in need. It is true that public charity has, in this respect, done, and is still doing, a great deal of good. Supposing, however, that charity-schools were as extensively introduced as national ones ought to be, and that they were furnished with equally good masters—neither of which suppositions is of a sort that can ever be realized—still they would be liable to many very serious inconveniences. Something of degradation always attaches to the idea of being educated at a school supported, either wholly or partly, by voluntary contributions. Such schools are rarely attended by the children of the higher or middle classes ; and those who do attend them cannot but feel that they are there only because they are paupers, dependent on the bounty of others ; and this feeling has a strong tendency to weaken that sense of independence, of moral dignity, and self-respect, for the want of which the best education cannot fully compensate. In other respects, this system is open to many objections. ‘It is really,’ to borrow the expressions of Mr. Malthus, ‘a great national disgrace, that the education of the lower classes of people in England should be left to a few Sunday-schools, supported by a subscription from individuals who can give to the course of instruction in them any kind of bias which they please.’—*Essay on Population*, fifth edition, vol. iii., p. 204.

We intend, at some future period, to enter into a pretty full examination of the truly important questions to which we have now merely alluded. We shall then state the reasons which seem to us not merely to warrant, but to require, the

interference of government in the establishment of schools for elementary instruction in every district of the country ; explaining what we conceive to be the proper mode of establishing such schools, the branches of education that ought to be taught in them; and the sort of control under which they ought to be placed. At present, however, we think we shall be doing an acceptable service to our readers, by laying before them a few details as to what has actually been accomplished, in regard to the establishment of a system of public instruction in other countries. This will greatly facilitate our future inquiries, by showing what difficulties have been surmounted, and by furnishing facts and statements to which an appeal may easily be made. We begin with the Scotch system, not because it is the least known, though the English public are but very imperfectly informed with respect to it, but because it is one of the best that has been established, and because its institution is the most applicable precedent in the condition of England.

Since the era of the Revolution, a public school has been established in every parish in Scotland. The foundations of the system were, however, laid at a much earlier period. It was enacted by the Scotch Parliament, in 1494, that all barons and substantial freeholders throughout the realm should send their children to school from the age of six to nine years, and then to other seminaries, to be instructed in the laws ; that the country might be possessed of persons properly qualified to discharge the duties of sheriffs, and to fill other civil offices. Those who neglected to comply with the provisions of this statute were subjected to a penalty of 20*l.* Scotch ; and Dr. Henry has remarked, that soon after the passing of this act, several individuals began to be distinguished for their classical acquirements, and that learning was much more generally diffused throughout the country.

In 1615, an act of the Privy Council of Scotland empowered the bishops, along with the majority of the landlords or heritors, to establish a school in every parish in their respective dioceses, and to assess the lands for that purpose. This act of the Privy Council was confirmed by an act of the Scotch Parliament, in 1633 ; and under its authority schools were established in the lower and the more cultivated districts of the country. But the system was still far from being complete ; and the means of obtaining elementary instruction continued so very deficient, that it became necessary to make a more complete and certain provision for the establishment of

schools. This was done by the famous act of 1696, the preamble of which states, that 'Our Sovereign Lord, considering how prejudicial the want of schools in many places has been, and how beneficial the establishing and settling thereof will be to this church and kingdom, therefore, his Majesty, with advice and consent, &c.' The act went on to order, that a school be established, and a schoolmaster appointed in every parish; and it further ordered that the landlords should be obliged to build a school-house, and a dwelling-house for the use of the master; and that they should pay him a salary, exclusive of the fees of his scholars; which should not fall short of 5*l.* 11*s.* 1*d.* a year, nor exceed 11*l.* 2*s.* 2*d.* The power of nominating and appointing the schoolmaster was vested in the landlords and the minister of the parish; and they were also invested with the power of fixing the fees to be paid him by the scholars. The general supervision of the schools was vested in the presbyteries in which they are respectively situated; who have also the power of censuring, suspending, and dismissing the masters without their sentence being subject to the review of any other tribunal.

It has been usually expected that a Scotch parish schoolmaster, besides being a person of unexceptionable character, should be able to instruct his pupils in the reading of English, in the arts of writing and arithmetic, the more common and useful branches of practical mathematics, and that he should be possessed of such classical attainments as might qualify him for teaching Latin, and the rudiments of Greek. The General Assembly of the Church of Scotland recommended, in 1706, 'To such as have the power of settling schoolmasters in parishes, to prefer those who have passed their course at colleges or universities, and taken their degrees, before others who have not, *cæteris paribus.*' This judicious recommendation has not been so generally attended to as it ought to have been, and the parochial schoolmasters, as a body, have rather degenerated of late years in their attainments; but still very many of them have had the advantage of a University education.

It will most probably excite surprise, that any tolerably well educated person should ever have thought of becoming a candidate for a situation, the emoluments of which were so trifling as those of a Scotch parish schoolmaster have always been. But for a long period after the passing of the act of 1696, a salary of 11*l.* a year, exclusive of a house and garden, was in Scotland no inconsiderable object; and, added to the school fees, served to place the master nearly

on a level with the bulk of the respectable inhabitants of country parishes. At the period in question, refinement had made very little progress in the northern parts of the empire. The wants of the people were few and easily supplied ; they had no taste for foreign commodities, of which, indeed, they were almost entirely ignorant ; their clothes, which were of the coarsest description, were usually manufactured at home ; and, although the clergymen and respectable inhabitants of those days may have had a greater command over the necessaries of life, they certainly were less abundantly supplied with its comforts and conveniences, than the labourers of the present day. The rent of the best shops in Glasgow, which now exceeds 200*l.* a year, did not, a century ago, exceed 5*l.* or at most 6*l.* (*Cleland's Annals of Glasgow*) ; and there has been a similar, though, perhaps, a less extraordinary rise in the price of most other things. The attainment of the station of schoolmaster was also considered as a preparatory step to the situation of clergyman, which at that time was an object of the highest ambition. It is difficult, indeed, to conceive how few avenues were then opened in Scotland to wealth or distinction of any sort. Enterprising young men were usually in the habit of emigrating to foreign countries, where many of them became highly distinguished both in arts and sciences ; but previously to the middle of last century, there were hardly any means by which the most ambitious spirit, if he remained at home, could hope to elevate himself above the rank to which he originally belonged ; so that humble as it was, the situation of schoolmaster was regarded as a very desirable one by the mass of the people. But after the introduction of manufactures and commerce had opened new and various channels by which ingenious, enterprising, and industrious individuals might attain to opulence and consideration, and after a vastly more expensive mode of living had been, in consequence, universally introduced, the situation of the schoolmasters was changed very much for the worse ; their poverty became quite as conspicuous as their learning ; they drew their recruits only from the lowest ranks of the people ; and their character, as a body, was a good deal deteriorated. At length, however, their depressed condition attracted the attention of the legislature ; and in 1802 an act was passed, raising the *maximum* statutory salary, payable to the master, to 22*l.* 4*s.* 5*d.* and the *minimum* to 16*l.* 13*s.* 4*d.*, both exclusive of school fees ; and supposing the number of established schoolmasters to be 900, and their statutory salaries to amount to 20*l.* a year at an average, both of which suppositions are, we believe, very near

the truth, it will be seen that the whole cost of this most excellent establishment, exclusive of houses, gardens, and fees, does not exceed 18,000*l.* a year.

The fees paid by the scholars attending the Scotch parish schools have always been very moderate. At this moment they may be reckoned, at an average, at about 2*s.* 6*d.* or 3*s.* a quarter for English ; 4*s.* or 4*s.* 6*d.* for writing and arithmetic ; and from 5*s.* to 7*s.* 6*d.* for Latin and Greek. In some schools the charges are less than these, and in a few they are higher ; but we believe that the above may be set down as the common and ordinary charge. The moderation of the school fees has brought the advantages of a *paid* and therefore a *prized* education within the reach of almost every individual. The custom of sending children to school has long been quite universal. The poorest individuals endeavour to secure the advantages of education to their families ; and would consider it as the greatest misfortune were they unable to send their children to school.

It would be no easy matter to exaggerate the beneficial effects of the elementary instruction obtained at parish schools, on the habits and industry of the people of Scotland. It has given to that part of the empire an importance to which it has no claim, either from fertility of soil or amount of population. The universal diffusion of schools, and the consequent education of the people, have opened to all classes paths to wealth, honour, and distinction. Persons of the humblest origin have raised themselves to the highest eminence in every walk of ambition, and a spirit of forethought and energy has been widely disseminated.

At the period when the act of 1696 was passed, Scotland, which had suffered greatly from misgovernment and religious persecutions, under the reigns of Charles II. and his brother, James II., was in the most unprosperous condition. There is a passage in one of the discourses of the celebrated Scotch patriot, Fletcher of Saltoun, written in 1698, only two years after the act for the establishment of parochial schools had been passed, that sets the wretched state of the country in the most striking point of view.—‘There are,’ says he, ‘at this day in Scotland, besides a great many families very meanly provided for by the church boxes, with others who, by living upon bad food, fall into various diseases, two hundred thousand people begging from door to door. These are not only no way advantageous, but a very grievous burden to so poor a country. And although the number of them he, perhaps, double to what it was formerly, by reason of this present great distress, yet in all times there has been about

a hundred thousand of these vagabonds, who have lived without any regard or subjection, either to the laws of the land, or even those of God and nature. No magistrate could ever discover which way one in a hundred of these wretches died, or that ever they were baptiz'd. Many murders have been discovered amongst them; and they are a most unspeakable oppression to poor tenants, who if they do not give bread, or some kind of provision, to perhaps forty such villains in a day, are sure to be insulted by them. In years of plenty many thousands of them meet together in the mountains, where they feast and riot for many days; and at country weddings, markets, burials, and other the like public occasions, they are to be seen, both men and women, perpetually drunk, cursing, blaspheming, and fighting together. These are such outrageous disorders, that it were better for the nation they were sold for the gallies or the West Indies, than that they should continue any longer to be a burden and a curse upon us.'—(First Discourse, p. 144.)

We suspect that there must be some exaggeration in the numbers mentioned in this very striking paragraph. At the period when this Discourse was written, there were not certainly a million of inhabitants in Scotland; and it is difficult to conceive how so large a proportion as a *fifth*, or even a *tenth*, could have subsisted as common beggars. There can be no doubt, however, that their number was very great. Fletcher was intimately acquainted with the state of the country; his good faith is unimpeachable; and it is impossible he could have made such a statement unless there had been very strong and what he reckoned quite sufficient grounds for it. The destitution and disorder of the Scotch population at the period referred to, is, indeed, abundantly established by statements in acts of parliament, and other authoritative documents. No country ever rose so rapidly from so frightful an abyss. In the autumn circuits or assizes for the year 1757, no one person was found guilty, in any part of the country, of a capital crime. And now, notwithstanding the increase of population, and a vast influx of paupers from Ireland, there are very few beggars in the country; nor has any assessment been imposed for the support of the poor, except in some of the large towns, and in the counties adjoining England; and even there it is so light as scarcely to be felt. This is a great and signal change. We cannot, indeed, go quite so far as those who ascribe it entirely to the establishment of the parochial system of education. It is, no doubt, most true, that this system

has had great influence in bringing about the change; but much must also be ascribed to the establishment of a regular and greatly improved system of government; to the abolition of hereditary jurisdictions, by the act of 1748; and to the introduction of what may, in its application to the vast majority of cases, be truly said to be a system of speedy, cheap, and impartial justice. Certainly, however, it was the diffusion of education that enabled the people to avail themselves of these advantages; and which has, in consequence, led to a far more rapid improvement than has taken place in any other European country.

It is believed to be doubtful, whether Scotland can continue to reap the full benefit it has hitherto derived from this establishment, by commanding the services of a sufficient supply of properly qualified teachers, without a considerable increase of the salaries. At this moment the entire emoluments, including the fixed salaries and fees, but excluding the houses, of the schoolmasters of Scotland, do not, at an average, exceed 45*l.* or 50*l.* a-year. And under the present circumstances of the country, there are but slender grounds for thinking that individuals will be found, possessed of the qualifications hitherto deemed indispensable for a schoolmaster, to devote themselves to a business, where the emoluments are so trifling, and which affords them no prospect of being able to rise in the world. A want of properly qualified candidates for the situation of schoolmaster has, in many instances, been already experienced; and it seems to be the opinion of all who have reflected upon the subject, that something ought to be done to improve the condition of the masters. This, however, is a very difficult subject, and one that requires the maturest consideration. It is plain that the increase ought not to be made by raising the school fees; for, were they raised, the great object of the institution, which is to afford elementary instruction to the lower orders of the people, would, in so far, be defeated; and, on the other hand, there are great difficulties with respect to an increase of the fixed salary. It must always be borne in mind, that the object of that salary is not to render the master independent on the fees of his scholars, or to furnish him with the greater part of his subsistence, but to serve as a species of retaining fee or premium, to secure the constant attendance of a person who shall be able to instruct the young, and who shall have the strongest interest to perfect himself in his business, and to attract the greatest number of scholars to his school. If the master derived anything like a tolerably comfortable

income from his fixed salary, it is clear he would not have the same interest to exert himself that he has at present ; and, like other functionaries placed in similar situations, he would soon learn to neglect his business, and to consider it as a drudgery only to be avoided.

But the difficulty in question is not an insuperable one ; and in some future number we shall endeavour to show how the emoluments of the schoolmasters may be increased, without in any respect diminishing their usefulness, and how several defects, that at present exist in the Scotch system, may be remedied.

The United States of America have, with a degree of intelligence and liberality that does them high honour, made the most ample provision for the elementary instruction of all classes of people. In the new states, *one* square mile in every township, or one *thirty-sixth* part of all the lands, has been devoted to the support of common schools, besides seven entire townships for the endowment of larger seminaries. In the older states, grants of land have frequently been made for the same purposes ; but in New England all sorts of property are assessed for the support of the primary schools, which are established in every township. The principles of this system and its practical operation were pourtrayed in a very striking manner by Mr. Webster, a distinguished member of Congress, in the convention held ~~at~~ <sup>in</sup> Massachusetts in 1821. 'For the purpose of public instruction,' said he, 'we hold every man subject to taxation in proportion to his property, and we look not to the question whether he himself have or have not children to be benefited by the education for which he pays ; we regard it as a wise and liberal system of police, by which property, and life, and the peace of society, are secured. We seek to prevent, in some measure, the extension of the penal code, by inspiring a salutary and conservative principle of virtue and of knowledge in an early age. We hope to excite a feeling of respectability and a sense of character, by enlarging the capacities and increasing the sphere of intellectual enjoyment. By general instruction we seek, so far as possible, to purify the moral atmosphere ; to keep good sentiments uppermost, and to turn the strong current of feeling and opinion, as well as the censures of the law, and the denunciations of religion, against immorality and crime. We hope for a security beyond the law and above the law, in the prevalence of enlightened and well-principled moral sentiment. We hope to

continue and to prolong the time, when, in the villages and farm-houses of New England, there may be undisturbed sleep within unbarred doors. Knowing that our government rests directly upon the public will, that we may preserve it we endeavour to give a safe and proper direction to that public will. We do not, indeed, expect all men to be philosophers, or statesmen; but we confidently trust, and our expectation of the duration of our system of government rests upon that trust, that by the diffusion of general knowledge, and good and virtuous sentiments, the political fabric may be secure, as well against open violence and overthrow, as against the slow but sure undermining of licentiousness. We rejoice that every man in this community may call all property his own, so far as he has occasion for it to furnish for himself and his children the blessings of religious instruction and the elements of knowledge. This celestial and this earthly light he is entitled to by the fundamental laws. It is every poor man's undoubted birthright—it is the great blessing which this constitution has secured to him—it is his solace in life—and it may well be his consolation in death, that his country stands pledged, by the faith which it has plighted to all its citizens, to protect his children from ignorance, barbarism, and vice.'

In the southern states of the Union, where the means of education were not so abundant, a zealous attention has lately been awakened to the subject; and families in sequestered situations unite, at considerable expense, to find teachers for their children. But no state in the Union, nor, perhaps it may be added, any country in the world, is so amply provided with the means of elementary instruction as the state of New York, in which there were, in 1823, no less than 7,382 common schools, affording education to 400,534 young persons, which was rather more than a *fourth* part of the entire population! In the middle and eastern states, the common people are, perhaps, better educated than in any other part of the world; and there is every probability that the western and southern states will soon share the same distinction. It is to this circumstance—to the superior degree of comfort the people enjoy—and to the elevation of character nourished by their free institutions, that we must attribute the non-existence, in most parts of the United States, of what is usually termed a mob or rabble.\*

Of the continental states, Switzerland and Holland are among the best furnished with the means of obtaining ele-

\* Malte Brun's Geography, vol. v. p. 249.

menary instruction ; and it is gratifying to observe the efforts that have lately been made to diffuse education throughout other countries. Frederick the Great of Prussia, whose fame as a warrior has obscured his talents as a statesman, has the distinguished merit of being the first continental sovereign who endeavoured to bring education within the reach of all classes of his subjects. The late President of the United States, Mr. Quincy Adams, has, in his Letters on Silesia, given a very full and interesting account of the seminaries which Frederick caused to be established in every village of Silesia, and which have since been copied in other states, in consequence of the experience of their good effects. We are sure we shall gratify our readers by laying before them a few extracts from Mr. Adams' valuable and interesting work.

'At the time of the conquest of Silesia,' says Mr. Adams, 'education had seldom been made an object of the concern of governments ; and Silesia, like the rest of Europe, was but wretchedly provided either with schools or teachers. In the small towns and villages, the schoolmasters were so poorly paid, that they could not subsist without practising some other trade besides their occupation as instructors ; and they usually united the character of the village fiddler with that of the village schoolmaster. Even of these there were so few, that the children of the peasants in general, throughout the province, were left untaught. This was especially the case in Upper Silesia. Frederick issued an ordinance, that a school should be kept in every village, and that a competent subsistence should be provided for the schoolmaster, by the joint contribution of the lord of the village and of the tenants. The superintendence of the schools was prescribed as the duty of the clergy.'

Mr. Adams then goes on to describe the assistance that Frederick derived in the prosecution of this meritorious plan from Felbiger, an Augustine monk, who travelled to different countries to obtain an acquaintance with the best modes of teaching, and under whose superintendence pattern schools were established at Breslau, Glatz, and other places, which all the candidates for the situation of schoolmaster are obliged to attend. Mr. Adams then continues as follows :—

'After all these preparatory measures had been carried into effect, an ordinance was published in the year 1765, prescribing the mode of teaching as adopted in the seminaries, and the manner in which the clergy should superintend the efficacious establishment of the system. The regulations of this ordinance prove the earnestness with which the King of

Prussia laboured to spread the benefits of useful knowledge among his subjects. The teachers are directed to give plain instruction, and upon subjects applicable to the ordinary concerns of life; not merely to load the memory of their scholars with words, but to make things intelligible to their understanding: to habituate them to the use of their own reason, by explaining every object of the lesson, so that the children themselves may be able to explain it, upon examination. The candidates for school-keeping must give specimens of their ability, by teaching at one of the schools connected with the seminary, in presence of the professors, that they may remark and correct anything defective in the candidate's method. The school tax must be paid by the lord and tenants, without distinction of religions. The boys must all be sent to school from their sixth to their thirteenth year, whether the parents are able to pay the school tax or not. For the poor, the school money must be raised by collections. Every parent or guardian who neglects to send his child or pupil to school, without sufficient cause, is obliged to pay a double tax, for which the guardians shall have no allowance. Every curate must examine, weekly, the children of the school in his parish. A general examination must be held annually by the deans of the districts of the schools within their respective precincts; and a report of the condition of the schools, the talents and attention of the schoolmasters, the state of the buildings, and the attendance of the children, made to the office of the vicar-general, who is bound to transmit all these reports to the royal domain offices, from which orders are issued to supply the deficiencies in the schools. This system was at first prepared only for the Catholic schools; but it was afterwards adopted by most of the Lutheran consistories.

The system had at first many difficulties to contend with. The indolence of the Catholic clergy was averse to the new and troublesome duty imposed upon them. Their zeal was alarmed at the danger arising from this diffusion of light to the stability of their church; they considered alike the spirit of innovation and the spirit of inquiry as their natural enemies. But the firmness of the government overcame every obstacle. There are now more than 3500 schools established in the province. Before the seven years war, there had not been more than one periodical journal or gazette published in the province at one time; while there are now no fewer than seventeen newspapers and magazines, which appear by the day, the week, the month, and the quarter, and many of them upon subjects generally useful, and which contain very

valuable information on all the most interesting topics of discussion.'

The effects of this system of education on the condition of the people have been equally striking and beneficial. Agriculture and manufactures have been vastly improved and extended. Silesia is, indeed, at this moment, one of the most flourishing districts of the continent. The revolution effected by the introduction of the system of universal instruction is stated by the native writers, quoted by Mr. Adams, to have been not less important, though of a slower and milder character than that of Luther. The habits of the people have been signally improved; and they have become, as every one knows, among the most intelligent, orderly, and industrious, in Europe.

According to a German periodical of good authority, (*Allgemeine Schulzeitung*, Darmstadt,) it appears that, of the 12,256,725 inhabitants belonging to the different states forming the Prussian monarchy in 1826, there were 4,487,461 children below fourteen years of age, being 366 children for every 1000 inhabitants, or nearly  $\frac{1}{3}$  of the whole population. From the same work it further appears that there were then in the Prussian dominions 20,887 elementary schools, and 736 schools for more advanced scholars, exclusive of Universities. These schools employed 22,262 masters, 704 mistresses, and 2,054 assistants. Of every 1000 children in Prussia, under fourteen years of age, 371, at an average, attended school. In some places, however, the proportion was much higher, and in others proportionally less, showing that the advantages of education are still very unequally diffused over the kingdom.

The following is a list of the provinces, and of the number of children, out of every 1000 under fourteen years of age, at school:—

Magdebourg . . . . .	524	Frankfort, &c. . . . .	423
Merzebourg . . . . .	495	Potsdam . . . . .	416
Erfurt . . . . .	467	Stettin . . . . .	413
Liegnitz . . . . .	459	Minden . . . . .	412
Arnsberg . . . . .	443	Treves . . . . .	410
Breslau . . . . .	438	Oppeln . . . . .	390
Munster . . . . .	432	Aix-la-Chapelle . . . . .	272
Kæslin . . . . .	370	Marienwerder . . . . .	242
Gumbinnen . . . . .	355	Stralsund . . . . .	202
Königsberg . . . . .	345	Posen . . . . .	182
Cologne . . . . .	311	Bromberg . . . . .	148
Dantzig . . . . .	295		

General average, 371 per 1000.

But the change for the better, consequent to the system of instruction introduced into Silesia, seems to be inferior to that which has followed the introduction of national schools into Wirtemberg, Baden, Bavaria, and generally in all those states included in what was formerly denominated the Confederation of the Rhine. In Wirtemberg, indeed, the inhabitants have been pretty well supplied with the means of education for near a century past; but, during the last thirty years, the system has been very greatly extended and improved. At present, not only in Wirtemberg, but also in Baden, Hesse, &c., a public school is established in every parish, and, in some instances, in every hamlet. The master receives, as in Scotland, a fixed salary from the parish, exclusive of a small fee from the pupils, varying according to their age, and the subjects in which they are instructed. The fees are fixed by government, and are everywhere the same. Exclusive of the salaries and fees, the masters are furnished with a house, a garden, and, in most instances, a few acres of ground, corresponding to the *glebes* of the Scotch clergy. The law requires that the children should be instructed in reading, writing, and arithmetic; and it is specially enacted that they shall be instructed in the principles of German grammar, and in composition. The books used in the schools of Wirtemberg and Baden, and generally throughout Germany, are very superior to those used in similar establishments in this country. They consist of geographical, biographical, and historical works, and of elementary treatises on moral science, natural history, and the principles and practice of some of the most important and useful arts. In all the larger schools, the boys and girls are kept separate, and the latter, in addition to reading, writing, and arithmetic, are taught all sorts of needle-work, the knitting of stockings, the making of clothes, &c.; receiving at the same time, lessons in the art of cookery, the management of children, &c. The supervision of the schools is intrusted, in every parish or *commune*, to a committee, consisting of a few of the principal inhabitants; the clergy of the parish, whether Protestants or Catholics, being always *ex-officio* members of the committee. This body is intrusted with the duty of inspecting the school, and is bound to see that the master does his duty, and that the children regularly attend. No particular system of religion is allowed to be taught in any of the schools of Wirtemberg, and most of the other Germanic states. The tuition of this important branch is left entirely to the clergy, and the parents of the children, so that the sons and daughters of Catholics, Lutherans, Calvin-

ists, Quakers, &c. frequent the same schools, and live in the most perfect harmony.

There is, it is said, the greatest desire among the lower classes that their children should enjoy the advantages of the excellent education provided for them. But the governments of Wirtemberg, Hesse, Bavaria, &c., have not trusted entirely to this feeling, but have enacted regulations by which *every individual is compelled to send his children to school, from the age of six to fourteen years!* In Hesse, for example (and its regulations are similar to those in the other states), the public functionaries transmit regularly to government, once every six months, a list of the children in their respective districts who have attained their sixth year; and they are bound to see that they are sent to school. In the event of the parents being unable to pay the school fees, a statement to that effect is prepared by the parochial authorities, and the fees are paid by the public. The German publicists contend that this part of the system is indispensable to ensure its entire success; and that, were it left to the option of the parents, some children would not be educated at all; while a great many would be taken prematurely from school, before they had mastered those more advanced branches that are of the greatest importance. We are aware of the objections that may be urged to this system; but we are firmly convinced that they are very far overbalanced by the advantages of which it is productive.

In Bavaria, the beneficial consequences resulting from the establishment of a system of national education have been more signal than in any other European country. Half a century ago, the Bavarians were the most ignorant, debauched, and slovenly people between the Gulf of Genoa and the Baltic. (For proofs of what is now stated, see *Riesbeck's Travels in Germany*, vol. i., cap. xi., &c.) That they are at present patterns of morality, intelligence, and cleanliness, it would be going too far to affirm; but we are bold to say that no people has ever made a more rapid advancement in the career of civilization, than they have made during the last thirty years. The late and present Kings of Bavaria have been truly the fathers of their country; for they have not only swept away myriads of abuses, and established a representative system of government, but they have laid the only sure foundations of permanent and real improvement in the organization of a truly admirable system of national education. A school has been established in every parish of Bavaria, to which, as already observed, every one is obliged to send his children from the age of six to fourteen;

Lyceums, Colleges and Universities have also been instituted for the use of those who are desirous of prosecuting their studies; and every facility is afforded for the acquisition of the best instruction, at the lowest price. In Bavaria the schools are inspected, and reports regularly made upon their condition, by properly qualified officers, appointed for that purpose by government. There is a particular department in the ministry of the Interior appropriated to the supervision of the different kinds of schools. We subjoin a list of the places of education and the number of teachers, pupils, &c. in Bavaria, in 1828.

PLACES OF EDUCATION.		Number.
Universities	.	3
Lyceums	.	7
Gymnasia	.	18
Colleges	.	21
Preparatory Schools	.	85
Houses of Education	.	16
,, for higher branches	.	7
Boarding Schools for girls	.	2
Normal Schools	.	7
School for foreigners	.	1
Schools of Law	.	2
Veterinary Schools	.	2
Schools of Midwifery	.	2
Royal Schools	.	2
Public or National Schools	.	5,394
TEACHERS AND PUPILS.		
Inspectors of Schools	.	286
Teachers	.	7,114
Pupils of all classes, about	.	498,000

Now, as the population of Bavaria is almost exactly four millions, it follows, that not less than *one-eighth* of the entire population is at school. This is a very high proportion, and shews conclusively how universally education is diffused. In Scotland it is supposed that the individuals at school amount to about *one-tenth* of the entire population.

Throughout Germany the greatest attention is paid not merely to the acquirements of the teachers, but also to their *capacity for teaching*. To ensure proficiency in this respect, *normal* or pattern schools have been established in all the principal towns, which are attended by those who are candidates for the situation of master; who, besides being instructed in the branches they are to be employed in teaching, are at the same time instructed in the best methods of teaching, and in the conduct proper to be followed in the ma-

nagement of scholars. Some of these schools justly enjoy a very high reputation ; and their establishment has had the most powerful and salutary influence on the system of instruction. No one is admitted to the pattern schools under thirteen years of age ; and candidates are obliged to have made considerable proficiency in various branches. At the famous *normal* school of Rastadt, the pupils, among other indispensable requisites, are expected to be masters of the elements of music, particularly the *piano!* (*Bulletin des Sciences Géographiques*, Nov. 1829, p. 334.) The elementary course at the same school commences with anthropology.

Mr. Loudon, well known to many of our readers as the author of some excellent compilations on agriculture and gardening, travelled over most parts of Wirtemberg, Bavaria, and Baden, in 1828, and bears the most unqualified testimony to the excellence of the system of public instruction adopted in them, and to the beneficial effects that have resulted from it. His statement, in some of its details, is, however, probably exaggerated ; and the present condition of the peasants ought not to be attributed *entirely* to education, as it is said to have been very good before the present system of education was established.—‘ From what,’ says he, ‘ I have seen of this country (Wirtemberg), I am inclined to regard it as one of the most highly civilized in Europe. I am convinced that the great object of government is more perfectly attained here, than even in Great Britain ; because, with an almost equal degree of individual liberty there are incomparably fewer crimes, as well as far less poverty and misery. Every individual in Wirtemberg reads and thinks, and to satisfy oneself that such is the case, he has only to enter into conversation with the first peasant he meets ; to observe the number and style of the journals that are everywhere circulated ; and the multitude of libraries in the towns and villages. I did not meet with a single beggar in Wirtemberg, and with only one or two in Bavaria and Baden. The dress of the inhabitants of Wirtemberg, as well as those of a great part of Bavaria and Baden, appeared to me to indicate a greater degree of comfort than I had ever observed in any other country, with the exception perhaps of Sweden, and the lowlands of Scotland.’ For these and many other highly interesting details, as to the state of education and society in Wirtemberg and Bavaria, &c., we beg to refer to Mr. Loudon’s excellent letter to Count Lasteyrie, entitled *Des Etablissements pour l’Education Publique en Bavière, &c.*

The provision for public instruction in France, particularly

in the southern departments, is very defective. It was enacted by a law of the 13th September, 1791, ‘That a system of public instruction should be organized, that the public schools should be open to every one, and that no fees should be charged for the elementary branches.’ But this law, like so many others promulgated about the same period, has not been carried into effect; and at this moment France is worse provided with the means of elementary instruction, than most other European countries, Spain and Portugal excepted. Societies, and individuals at Paris, and other populous towns, have laudably exerted themselves to supply so great a want. But their efforts being openly opposed by the clergy, and secretly also by the late government, were not so successful as they would otherwise have been. It has been estimated by late French writers, well versed in such subjects, that there are at present in France 6,000,000 of children of age to attend primary and other schools; but that not more than 1,500,000 are in the way of being instructed! In addition to the children who are thus left uneducated, it is calculated that about 10,000,000 of adults, being about one-third of the entire population, can neither read nor write.—(*Bulletin Supplémentaire des Sciences Géographiques*, 1828, p. 25.) This state of things, as was to be expected, has already attracted the attention of the new government, who, we are glad to observe, have brought forward measures upon the subject.

The Russian government has done honour to itself, by the zeal with which it has laboured to promote the instruction of its subjects; and the prodigious advances which they have made within a comparatively limited period, shew that it has not laboured in vain.

It has been contended by Mandeville and others, that the universal instruction of the poor, in the elementary branches of education, would be injurious, inasmuch as it would render them discontented with their situation, and would consequently lead to tumult and disorder. Many answers have been given to this false and delusive though often repeated statement. But the real and conclusive answer is derived from experience. Of those who contend that the education of the lower orders will make them all anxious to be gentlemen, impatient of their condition, and prone to insubordination, we have only to ask, has the general instruction of the lower orders done this in Scotland, the United States, Switzerland, the province of Holland, Silesia, and Protestant Germany? Were any one asked to name the countries in which

the people are most distinguished for industry and fore-thought, and a proper respect for their lawful superiors, these are the very countries he would specify. It is in these that the blessings of education have been most widely diffused ; and while their inhabitants know what is due to themselves, they also know what is due to others. They would firmly oppose any invasion of their rights, and would not be much disposed to tolerate any very flagrant abuses ; but they are, at the same time, fully aware that turbulence and faction are utterly inefficient as means of advancing their condition, which must, in all cases, mainly depend on their own industry and good conduct. The question with respect to the advantages of education is therefore no longer *sub judice*.—It has been decided by the widest experience.—The patrons of ignorance, if there be now any such, ought, if they be consistent, to appeal to the state of Poland, Spain, and Turkey, as affording an excellent illustration of their doctrines ; while the patrons of education point to Scotland, the United States, Protestant Germany, &c., as vouchers for all that they have stated.

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## EDUCATION AT ROME.

### GREGORIAN, OR ROMAN COLLEGE.

THIS Institution, devoted to the public studies of the youth of the city and province of Rome, was founded, in 1582, by Pope Gregory XIII. (Buoncompagni), the well-known reformer of the Calendar, and the founder of several other colleges and useful establishments. The architect Ammanati of Florence was employed in raising this vast and handsome structure, which was considered at the time as the first and finest college in Italy. The Pope bestowed on it rich endowments, and gave the direction of the schools to the Society of Jesuits, who were then the most learned order in Christendom, and whose general, for the time, Borgia, contributed a donation of two hundred thousand crowns towards the support of the foundation. A seminary, or establishment for boarders and in-door students, was afterwards added. The College was styled *Gregorian*, in honour of its founder, but it became more generally known under the name of *Collegio Romano*, from its containing the great public schools of that capital, and being next in rank to the University of *La Sapienza*. The Society of Jesuits continued to have the direction of this as well as of most other colleges

in Rome, where they had no less than ten establishments, until 1773, when Clement XIV. (Ganganelli) suddenly suppressed their order. The education of youth was then taken from their hands, their professors were removed, or at least secularized, and a commission having been appointed to regulate the system of public instruction for the Roman States, the Roman College was placed under the superintendence of a Congregation of Studies, at the head of which was a cardinal, generally a man of learning, who appointed the masters and professors from among the secular clergy. It had been under this management for nearly thirty years when I became acquainted with it as a student and a boarder. The following is an outline of the method of our studies, as well as of the internal discipline of the institution.

The course of studies was as follows:—Boys, who entered at an early age, having merely a superficial knowledge of the first rudiments of Latin grammar, acquired under a private teacher, or at one of the day schools kept by the under curates and other unbenedicited clergymen, were sent to the *prima*, or lowest class, where Porrètti's Latin grammar was explained, and exercises given on its rules, which were also learned by heart. Phædrus' Fables, and some other easy book, was read. The following year, the student, on being reported by the master as competent, proceeded to the *second*, or next class, in which Latin prosody was taught, and hexameters and pentameters were constructed, with the assistance of the *Regia Parnassi*. Ovid's *Tristia* and Tibullus' Elegies were read and parsed. Prose composition and syntax were attended to at the same time; and Cornelius Nepos and Cicero de Officiis were explained. With this class grammatical studies ended.

The next, or third year, the student entered the class of *Humanities*, which embraced the study of the elegancies of the Latin language, the figures of oratory, and the various forms and metres of Latin poetry. The work adopted as a text book in this class was that of Father de Colonia on Rhetoric, an excellent compilation in its way. Of the poets we read Virgil and Horace, and as models of prose Cicero's Orations and Sallust. The editions of the poets were expurgated of improper passages. Subjects were given by the professor for compositions in prose and in verse.

The fourth class was styled Rhetoric, in which Latin continued to be attended to, but the study of Greek constituted an essential part of this year's instruction. From thence the student proceeded to the higher or philosophical studies, the course of which generally occupied two years. In the first

year the mornings were devoted to algebra and geometry, the professor of which was the well known mathematician and astronomer Calandrelli, who had also the direction of the observatory annexed to the College. In the afternoons we attended the lecturer on logic and metaphysics, who read his course, written in Latin, and founded chiefly on the works of Genovesi, the Neapolitan metaphysician and economist of the last century. Locke and Condillac were freely quoted as authorities. Disputations also, in Latin, were occasionally held between the students.

The second year of ‘philosophy’ was devoted to physics and chemistry, the professor of which was Conti; natural history, on which Reichenbach lectured, and ethics. Both Conti and Reichenbach are names of note in the scientific world.

After these two years of philosophical course, those who wished to make deeper studies in any of the various sciences, or to take degrees in the learned professions, left the College, and repaired to the Gymnasium, or University of Rome, called *La Sapienza*, founded as early as the thirteenth century, and which is qualified to bestow diplomas; having chairs of civil and canon law, medicine, experimental philosophy, Oriental languages, divinity, &c. This University was under the direction of the College of Advocates, superintended by three cardinals.

Those students, however, who were destined for the church, continued in the Gregorian College, and went through their course of theology, which occupied four years. This was divided into scholastic and dogmatic theology, the Hebrew language, and the study of the sacred Scriptures; the lecturer on which last was, at this time, the celebrated Hebraist, de Rossi.

The College forms a quadrangle, having an ample court in the middle, round which are two tiers of arcades. The school, or class-rooms, are ranged along three sides of the square. Those of Latin, Greek, mathematics, and metaphysics are on the lower; and the others in the upper arcades. The fourth side communicates with the other part of the building, where are the seminary, or boarding establishment, the apartments of the professors and other functionaries, the library of the museum left by the learned Father Kircher, and the church of St. Ignatius, which belongs to the College.

The great college bell tolled every morning and afternoon half an hour before the beginning of the lectures, to give time to the students to assemble. The instruction in the lower schools lasted two hours in the morning and two in

the afternoon ; and the lectures in the upper classes lasted each one hour. The classes closed at half past eleven in the morning, when the students went home to their families to dinner ; they opened again at two in the winter, and four in the summer afternoons. The course of studies began on the 4th of November, and continued till the end of September following, with the interruption of a week's holiday at Christmas, and another week before Easter. Before the closing of the studies in September, there was a *concorso*, or academical competition for the prizes, which consisted of a gold and silver medal for each class. A day was appointed, in which all those students who had been assiduous and forward in their studies during the year, repaired to their respective schools and lecture-rooms, where a task was assigned to them by each professor, which they were to execute during that day, without quitting the room, and without communicating with each other. No books were allowed on this occasion. The papers being signed by each, were delivered into the hands of the professor, who forwarded them to the congregation, or committee of studies. Cardinal Borgia, a name not unknown in the Italian literary world, was president at the time I am speaking of.

About a fortnight afterwards came the day for the distribution of the prizes, which was made with much ceremony in the great College Hall, a spacious and handsome apartment, enriched with good paintings. The cardinal, and the other members of the congregation, all the professors, and many strangers of distinction, were seated at one end ; the students occupying the remainder of the apartment. After a short prayer, the secretary read the names of those who had won the gold or the silver medals, beginning from the lowest class, and making honourable mention of those who came nearest, which was expressed by the word *accessit*. The former went, each in turn, to receive their prizes. Cardinal Borgia's good natured and intelligent countenance brightened as he delivered to each the well-earned token, which he accompanied by a few words of approbation and encouragement. The student kissed the cardinal's hand, the usual mark of respect towards dignitaries of the church, and returned to his seat. The whole sight was animating, and the prospect of the ensuing vacations for the whole of October, a month most delightful in southern Italy, and devoted to country excursions, added not a little to raise the spirits of youth ; that day, in fact, closed the academical year, the gates of the schools were shut, and the little square before the College,

which divides it from the Doria palace, became silent and deserted.

Besides the annual prizes, there was in each class a system of rewards and encouragement for those students who were zealous in their application, and orderly in their behaviour. In the lower, or Latin classes, the boys were ranged into two divisions, called Romans and Carthaginians; occupying each one side of the school-room, and trying to rival one another. There was a Dictator, a *Princeps majorum gentium*, and a *Princeps minorum gentium*, appointed from among the ablest boys. These three dignitaries took their seats on the highest bench on one side of the room. Sometimes there were two Dictators, one for prose and the other for verse; sometimes the same individual held both ranks. Printed patents were delivered to them, stating their rank, and the length of time they had enjoyed it. They relieved the master of part of his labours, by looking over the tasks of the lower bench boys, and listening to their lessons; after which they made their report. Any undue favour or indulgence, if discovered, was severely rebuked, as sympathy, an easy or a generous disposition, would often give rise to partialities there, as well as in the most exalted councils or assemblies. The Dictator, in order to preserve his rank, was expected to resolve all difficult questions which other boys were not able to do. The master then used to turn gravely to him, and he was to answer quickly. If found deficient, and another boy, on being addressed by the master, shewed himself more ready and expert, the Dictator lost his seat, if not at the first, at least on the second occurrence of the kind. The Dictator was also expected to give to the rest of the school an example of steadiness and propriety of conduct. A strict silence was enjoined during school-time, not to be broken without the master's leave; and this was found to be the hardest restriction, and the most difficult to be enforced. Whispers between neighbours could not be repressed, which the master at times pretended not to see or hear. But if they were continued, and laughter, a common consequence, ensued, then an additional task, *pensum*, was imposed on the offenders. The number of these tasks was registered, and became a bar to obtaining a certificate of good conduct at the end of the year. When the master's eyes were turned away, or he seemed to be engaged in reading, then signs, a familiar mode of conversation in Italy, were resorted to by some of the boys; but, notwithstanding these occasional irregularities, a general appearance of decorum and propriety was preserved.

Punishments were very rare : there was a *Correttore*, a strong, vulgar, ill-favoured looking man, dressed in a rusty black gown, although he was a layman ; he had his room near the gate, and was provided with canes and whips, to execute the orders of the master. In some aggravated cases of disobedience, or other misconduct, especially among the boys of the lower classes, he was called in to administer a correction on the backs (not *bare*, however) of the refractory. The culprit was made to take off his coat only, and was then held by two boys, while punishment was inflicted. But the occurrence was extremely rare, except in the *prima*, or lowest class. During four years I studied in the college, I remember only once having seen an instance of it : the disgrace was much more severely felt than the blows. When boys became unruly, I have seen the *Correttore* called in, but merely *in terrorem* ; for on a show of returning duty, he was dismissed. The ordinary punishments were an extra task, or *pensum*, which was pretty frequently imposed, especially, as I have said, for the breaking of silence ; kneeling in the middle of the school, banishment to the dunces' bench, in case of inveterate neglect or stupidity ; and lastly, expulsion from the college.

The instruction given in the college might be called gratuitous, as there was only a trifling fee paid into the college fund on admission, and a yearly one at Christmas, left to the discretion of the students' families, to the respective masters. These latter were paid by the institution, and had apartments within the college. The funds of the establishment were derived from the endowments bestowed on it by the founder, Gregory XIII., and from legacies bequeathed by pious and benevolent persons. Boys were admitted into the lower classes as early as eleven years of age ; they were expected to know the first rudiments of Latin grammar. Admission was easily obtained, after an inquiry about character, &c. They dressed in their own clothes, which were only required to be decent and clean. No distinction or favour was paid to rank ; the humble tradesman's son was considered equal to the *benettante*, or young gentleman of property ; and, if superior to the latter in abilities and assiduity, enjoyed a corresponding importance over him. Equality within the walls of the college was not only observed, but often inculcated on the minds of the youths by the masters. The religious duties consisted of a short prayer at the beginning, and another at the end of lessons ; religious instruction was left to the parents, and to the curates of the respective parishes within which the boys lived. On Sundays, and other festi-

vals, the students were expected to attend mass in the annexed church of St. Ignatius.

Attached to the college was the *Seminario*, or boarding establishment, for a certain number of young men, who lived within the walls, and were subject to a regular discipline, while they attended the public classes, together with the out-door students. This was under the superintendence of a Rector, who was himself appointed by the Cardinal Vicario, the pope's *locum tenens* for the internal affairs of the city of Rome. A certain number of places in it, supported by the foundation, were filled by young men intended for the Church. These were called *alumni*. They generally went through the whole course of theological studies, and took orders; but if not so inclined, after some years passed at college, they were at liberty to leave. They provided at their own expense their clothes, linen, books, beds, and other furniture, and were expected to have a certain yearly allowance of pocket-money. Their board, lodging, and education were defrayed by the community. The nomination to vacancies belonged to the Pope and to some of the Cardinals. The remainder of the boarders paid a moderate yearly sum for their board and lodging, and left college after having completed their Latin studies, or their course of philosophy: these were called *convittori*. The whole cost of the latter to their families was about one hundred *scudi*, or dollars, per annum. No distinction whatever was made between these two classes of boarders, neither in their dress, accommodation, nor manner of living; they were altogether on the footing of perfect and indiscriminate equality. The dress consisted of a purple gown, or *sottana*, made of twilled stuff, buttoned down to the bottom; a black stiff collar and black stockings, shoes and silver buckles. When going out, they put on, over the gown, a *zimarra*, or loose cloak, of the same stuff and colour, with long flaps hanging from the shoulder, and a three-cornered hat. The inmates were divided, according to age, into three *camerate*, or squads, which were styled *piccoli*, *mezzani*, and *grandi*—little, middle, and grown-up. The squads consisted of from fifteen to eighteen boys each: they had their separate wards, or corridors, along which, on the right and left, were the rooms of the inmates, for every one had his separate apartment, into which no other boy was allowed to enter. A clergyman, with the title of Prefect, was in charge of each squad, and had his apartment on the same line with those of the boys, dined with them at the head of their respective tables, went out with them, and, in short, except during school-time, never lost sight of them.

There was nothing done to improve the students in the Italian language, if we except what took place during meals, when strict silence was enjoined, the vice-rector pacing up and down the refectory, and seeing that every thing went on orderly. Meantime one of the collegians, taken by turns from among the elder students, read from a pulpit some chapters of the ‘History of the Church,’ translated from the great work, the *Annales Ecclesiastici*, of Cardinal Baronius.

This may be said to have been the only exercise in Italian; a strange neglect of the native tongue, but one not uncommon in the old system of education of most continental countries. The boys on entering college were, of course, expected not to be entirely uninstructed in their own language, but, from that moment their proficiency in it was stopped for the sake of the Latin; and any acquaintance with the modern literature of their country, and with the elegancies of their living language, was deferred till after they left college. Italian books of poetry were not even allowed to be kept, especially by the junior boys, probably for two reasons, that their Latin studies might not be neglected, and also that their minds might not be tainted by the licentiousness which stains the pages of most Italian poets.

On Sundays and other holidays we were allowed two or three hours for walking out; and the places of resort were generally chosen from among some of the fine villas and pleasure-grounds of the Roman nobility. The choice of the place was decided by votes, submitted to the approbation of the vice-rector. The prefect, however, never lost sight of us. At other times the Forum, the Colosseum, the ruined Thermæ, St. Peter’s Church, or some of the other Basilicæ, the Pyramid of Cestius, the Cœlian, Palatine or Aventine Mounts, were the limits of our peregrinations. It was hardly possible that such scenes, closely connected as they were with the elements of our education and studies, should not make more or less impression on our youthful minds,—everything around us was either classic or religious. And yet Roman history, properly speaking, did not form part of our course of studies; another strange omission in a Roman college! But there were few students who did not know the principal events recorded in that wonderful narrative, allusions to which we found continually in the Latin authors which we read.

The common punishment for slight offences was confinement to one’s room. No flogging was in use. When the misconduct was of a graver nature it was reported to the vice-rector, who stopped the offender’s wine, or fruit, or even meat. In some cases the culprit was made to kneel down in the

middle of the refectory during dinner. But admonition, impressive reasoning, appealing to the dictates of religion and of conscience, and often also to the feelings and self-love of the individual, were more generally resorted to, and not without effect. This task devolved chiefly upon the vice-rector, who was generally a person well acquainted with the disposition of youth. He was assisted in it by the chaplain or confessor, who once a week, or a fortnight at least, listened to the unburthening of the consciences of his young flock. The latter was a most kind, single-hearted priest, most zealous in the discharge of his duties. The rector seldom interfered, except in rare cases of irreligion, immorality, or open and determined insubordination, when the parents of the culprit were sent for, and expulsion from College ensued. Solitary confinement on bread and water was held out *in terrarem*, but an instance of it rarely occurred.

Religious instruction was limited to the practices I have mentioned, with the addition of high mass, which was performed in the church of St. Ignatius on great festivals, when vespers were chanted, and the collegians officiated in the choir; in the afternoon a sermon was preached, in which the Scriptures were explained, and the principal doctrines of morality inculcated. There were no mental restrictions, no controversial or fanatical spirit, no habits of gloomy mortification, no casuistical sophistry, none of those tortuous ethics which are attributed to the jesuits. If such had ever prevailed in the system of instruction afforded by that order, they were swept away at their expulsion; and the secular clergy, who had succeeded the fathers in the direction of education, taught nothing but what was openly taught from every pulpit, by every rector or curate, in every parish or church of Rome. The doctrines inculcated were, of course, Catholic and Roman; the infallibility of the church was asserted as well as the spiritual supremacy of the Pope over all the Catholic world, as a matter of delegated right. With regard to the withholding of the Scriptures, we—not the students of theology, to whom the study of the Scriptures formed part of their regular course—had no bibles in our possession, though Latin gospels were in the hands of several; but we read portions of the Scriptures in the lessons and offices every day, and had them explained on Sundays; and we were therefore acquainted with the principal parts of the Old Testament, and with the history of our Saviour's mission. The latter was frequently adverted to in public as well as in private, as the great model of our conduct. Concerning Italian Bibles, though they might not be seen at college, that of the Archbishop Martini was common

in private houses and booksellers' shops, and there appeared to be no difficulty in procuring the work, the publication of which had been fully sanctioned by the Pope. Besides, it must be observed, that the Latin Bible is as intelligible to all educated Italians, and especially Romans and Tuscans, as if it were written in the *vulgar* idiom, and that every one who is not absolutely illiterate, knows enough of Latin to understand the meaning of the prayers and lessons in the office or breviary.

At the end of the academical year the boarders or collegians removed for the October holidays, to a country residence belonging to the establishment near the town of Tivoli; this was truly a delightful period. School books were left behind, all tasks dispensed with, and except our religious exercises, both mornings and afternoons were employed in recreation, plays, and excursions about the romantic Appennines, which surround the ancient city of Tibur. The great cascade, the cascatelle, the remains of Hadrian's villa, and the villa d'Este, were visited in turns. It was the season of vintage, when gaiety smiles and frolic dances over the vine-clad hills of Italy; it was a season of universal rejoicing. Tivoli is situated at the entrance of the highlands of the Appennines, which rise higher and higher towards the frontiers of the neighbouring kingdom of Naples. In that direction the scenery is strikingly wild and impressive.

With the last day of October ended the *willeggiatura*, and we returned to Rome for the solemn festival of All Saints, after which the schools opened and we resumed our duties.

Such was our life at college, and such the method of instruction. Of the good points and the faults of the system, the reader will judge. The faults may be said to have been chiefly of omission. Geography, modern languages, mechanics, drawing, history, political philosophy, did not form part of the college studies. Of music, only the rudiments of the *canto fermo*, or Gregorian chant for the service of the church, were taught. Four years were spent in the study of Latin grammar, rhetoric, and the rudiments of Greek: this period may perhaps not appear too long to those who think that the advantages of classical instruction are not confined to the barren acquisition of one or two dead languages, but that the study of classic models gives a tone to the mind that is felt throughout life, and that their influence powerfully contributes to the forming of that character emphatically expressed in English by the word, "gentleman." But the same object might be attained, and more things be learned at the same time.

The method in the grammar schools was too mechanical, and destitute of analysis. In the classes of humanities and rhetoric, a more intelligent spirit prevailed. It is an attested fact, that good Latinists came out of the Roman college every year. The course of philosophy was confined and elementary, but then, as it has been remarked, the University of La Sapienza was open to those who wished to continue their studies. A young man who came out of college at eighteen, (and few remained beyond that age, except the students of divinity,) had still time before him sufficient to acquire what had been omitted in the preparatory education. Those boarders who took orders were generally provided with a living, some remained in the college as masters, and others became attached to some of the numerous institutions which exist in Rome.

The number of other colleges at Rome was very great, most of them being foundations for the education of boarders of various descriptions and countries; but as few of them afforded instruction at home, their inmates were generally sent to attend the classes in the Roman college. One college, *Il Clementino*, was solely reserved for young men of patrician families, whose education was more expensive, and who had private masters at home. During the occupation by the French, several foundations were suppressed, and their revenues taken from them. The celebrated college *De Propaganda Fide* was however preserved. With regard to the Roman college, since the re-establishment of the Jesuits at Rome, in 1814, I believe that both the schools and the seminary have been placed again under the direction of that order.

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#### MEDICAL SCHOOL OF PARIS.

THERE is no medical school in Europe to which, for many years past, so many British students have resorted, for the especial purpose of availing themselves of its advantages as a school, as that of Paris. Of those students from our own country who are seen in every French professor's lecture-room, and in the wards of every Parisian hospital, very few have the smallest expectation of French academical honours: they are attracted thither simply by the hope of acquiring a better knowledge of their profession than can be obtained at home.

Those who are conversant with medical literature will see abundant explanation of this custom of studying in the schools of the French pathologists, in the continual reference

made, in all our English medical works, to French authorities. Whilst the English have hardly extended their labours beyond special or descriptive anatomy, surgery, and the administration of medicines, they have left to foreigners, almost undisputed, the whole domain of physiology, with the exception of the nervous system ; and absolutely the whole field of general anatomy and of pathology. Perhaps purchasing their skill in the *science* of medicine by some sacrifice of ability in the department of practice, the French have yet been almost the only contributors of *new* medicines to the old stock, during the last thirty years ; and even in surgical skill they dispute the palm with the ablest surgeons of England. It is to these causes, rather than to any thing very widely differing from the plan of medical education followed in England, that the superior celebrity of the Parisian school of medicine is to be attributed. At the same time, the regulations enforced with respect to medical education are in most respects judicious.

All French students who aspire to the *Doctorate*, either in medicine or surgery, are obliged to prepare for their professional studies by a preliminary course of literature and science ; and to undergo an examination in some of the following subjects, on all of which the candidate is expected to be prepared : —Greek literature, Latin eloquence, Latin poetry, French eloquence, French poetry, philosophy, the history of philosophy, ancient and modern history, ancient and modern geography ; and also, mathematics, certain parts of physics (as acoustics, electricity, optics), chemistry, zoology, botany, and mineralogy.

The candidate must also have devoted four years to professional study : if he has studied at the provincial schools, and not in Paris, he must have been engaged in professional studies *six* years.

The studies of each year are thus divided :—

First Year, <i>Winter,</i>	Anatomy, Physiology, Chemistry.
<i>Summer,</i>	Hygïène, External Pathology, Botany.
Second Year, <i>Winter,</i>	Anatomy, Physiology, Operations.
<i>Summer,</i>	Hygïène, Pharmacy, Surgical Pathology, Clinical Surgery,

<b>Third Year,</b>	<b>Winter,</b>	Materiâ Medica, Clinical Medicine.
	<b>Summer,</b>	Operations, Clinical Surgery, Pathology (Theory of Medicine).
<b>Fourth Year,</b>	<b>Winter,</b>	Clinical Medicine, History of Medicine.
	<b>Summer,</b>	Pathology, Legal Medicine, Clinical Study in an Hospital, con- taining selected cases.—( <i>Cli- nique de perfectionnement.</i> ) Midwifery.

A certain number of the students (one hundred and twenty in each year), selected by public examination, have the additional advantage of practical instruction in dissection, and in surgical operations, in chemical, pharmaceutical, and physiological experiments, in medical physics, in the application of bandages and dressings, and in midwifery. The practical students are encouraged to diligence by prizes. The offices of assistant in the anatomical schools, and in the hospitals, are also held out as rewards to distinguished students, and are much sought after by them. One hundred and fifty external assistants are chosen every year from among them, for the different hospitals; and several internal assistants, who are lodged and boarded in the hospital, receive a small salary, and are promoted, by seniority, from one hospital to another.

The extensive library of the school of medicine is open to the students three days in the week; and tickets of admission are obtained, on application, to the museum of anatomy; as well as to the valuable collections at the Garden of Plants.

The period of medical study enforced by these regulations is attended with many advantages. Whilst the English student, preparing for general practice, crowds all the parts of his education into a space not exceeding two years, those of the same rank in France are obliged to spend at least double that time in study. Both teachers and students feel the benefit of this. Every thing is taken in order, and every thing is completely taught. The elementary parts of professional knowledge are so perfectly developed, and the student acquires such an acquaintance with general and practical anatomy, with chemistry, and with physiology, as to proceed in the third and fourth year to the observation of disease, to the pursuit of morbid anatomy, and even to

the experimental parts of physiology, well prepared to become master of all these sciences, and to improve them. The consequence is, that during the last ten years, such valuable works on the pathology of the brain, of the lungs, of the intestines, and of the skin, have been published by French writers, at the conclusion of their studies, or, at least, by very young men, as are without parallel among contemporary works on any part of medical science among ourselves.

The regulations of the anatomical department are such as to ensure a constant and almost unlimited supply of subjects for dissection. There is a chief of the anatomical department, who directs the labours of numerous prosectorors and assistants in such a way as he deems most advantageous for the interests of anatomical science : he instructs them in the art of making anatomical preparations, and regulates the distribution of subjects for dissection among the students, whose dissections are practised with the aid, or under the direction, of the prosectorors, who also repeat the demonstrative part of the recent lectures of the anatomist, or of the operative surgeon.

During the winter session, frequent opportunities are offered for attendance on short courses of lectures by eminent private lecturers, wherein most of those experiments are exhibited on which the principal truths of physiological science rest.

The hospital arrangements are singularly adapted to the purposes of study. The hospitals are very numerous, and of all sizes. In some, the student will find cases of all the diseases of children ; in some, all the diseases of women ; in some, every affection of the skin may be inspected at all times ; and there are large hospitals for the insane, from which the student is not, as in this country, rigorously excluded. A large proportion of the cases in all the hospitals become the subjects of clinical teaching ; that is, the pupils are carefully informed concerning the previous history and progress of the malady, its actual state, and the intention with which medicines are prescribed. Observations are made from day to day, in some of the hospitals at the bed-side, which keep the student's attention awake to what is done, and in case of death, the body is almost invariably inspected, and the morbid appearances are made the subject of a short lecture, or exhibited at the regular clinical lecture given by the physician or surgeon. The plan of clinical instruction is nearly the same in every hospital, and is pursued with a zeal and perseverance from which none but the most negligent can fail to profit. By a judicious division of his time, an active student may, consequently, in

the course of twelve months, become more familiar with hospital practice in Paris, may acquire a larger and more accurate knowledge of all the forms of disease, and a greater familiarity with pathological anatomy, than he can possibly obtain in London in more than double that period. There is also great facility of access to libraries, to museums, and to the meetings of scientific bodies, which afford relaxations both of a pleasing and of an instructive nature, not commonly or so fully enjoyed by students in other capitals.

It ought, however, to be observed, that this abundance of the means of scientific improvement appears to have drawn away the attention of many practitioners of the French school from the true end of medical study, namely, from the treatment and cure of disease. The activity with which attempts are made to check the march of maladies is certainly disproportionate to the zeal with which the effects of maladies are inquired into ; and there is sometimes room for suspicion that a love of morbid anatomy lessens a proper anxiety to preserve life. No pains are spared to ascertain the nature of disease, and the greatest industry is exhibited in the comparison of what was conjectured with what can be demonstrated after death. But much scepticism seems to prevail concerning the power of medicines, and much consequent indolence in their application in cases in which those accustomed to the energetic practice of English physicians are often of opinion, that death might be prevented, or much retarded.

Many of the French students, resorting to Paris from the distant provinces, aspire only to the inferior rank of *Officier de Santé*, and are unprepared, by a good education, to profit by the scientific opportunities of the place ; they are therefore often led away from the search after important truths to follow the refinements of teachers, whose most obvious defect is frequently a want of power to draw accurate general conclusions from what they so diligently observe and so admirably describe. Thus in no school are trifling minutiae of observation made of such prominent importance, or ill-founded theories of disease more prevalent.

Such, in brief, is, we believe, a just description of the present character of the French school. If we have not dilated upon the advantages which we freely acknowledge to exist, neither have we dwelt with acrimony on the few faults with which they are intermingled. There can certainly be no question that among other debts which science owes to French industry and talent, that of very extensive improvement in the science of medicine is most justly due to them ; and that many of the regulations of their schools might be adopted with benefit in our own.

## DISSENTING ACADEMIES.

### I.—*Education among the Early Dissenters.*

**WITHOUT** discussing the subject of non-conformity, as it originated in the seventeenth century, or as it exists in various modifications in the present day, the purpose we have in view in this Journal will be best accomplished, by giving a brief history of the rise and early condition of education among those who are usually classed under the general denomination of Dissenters.

Many of those who relinquished their situations in the church in consequence of the celebrated ‘Act of Uniformity,’ were men of acknowledged learning, as well as eminent worth; and being ejected from their livings by the operation of that enactment, they deemed it necessary to adopt immediate measures for the support of themselves and their families. It occurred to some of them, that by opening schools for the instruction of youth, or academies for the more especial purposes of theology, they might make their literary attainments available for their own benefit, and at the same time render an important service to society. ‘The edict,’ says Dr. Toulmin,\* ‘that deprived them of their livings, could not despoil them of their erudition. The literary taste which they had formed in the seats of the muses, and the treasures of knowledge which they had laid up, qualified them, in an eminent degree, when driven from their pulpits, to undertake the instruction of youth. The straitened circumstances of many obliged them, when they had lost the revenues of their vicarages and rectories, to seek some compensation by applying their talents and learning to the offices of education. Some became tutors in private families, some opened schools, and some established academies, in which they read lectures on different branches of Science and Theology.’

It is proper to remark, that the term *Academy*, till within the last few years, in which it has frequently been exchanged for *College*, was formerly used among Dissenters, almost exclusively, to denote a place of education for young men devoted to the Christian ministry. While general literature was not entirely neglected, and classical learning was more especially cultivated, the chief object of such institutions has always been to communicate theological knowledge. Academies were regarded as the seminaries peculiarly appropriated to those who were solicitous to prepare themselves for the labours of the pulpit; and to supply the means of such pre-

\* Historical View of the State of the Protestant Dissenters in England, &c. chap. iii.

paration has uniformly been recognized as an essential part of their constitution.

It is obvious that the rising generation of the earliest Dissenters possessed, in a great degree, the advantages of a university education, inasmuch as those who undertook their superintendence, whether in private families or in public seminaries, had received their own intellectual cultivation in those seats of learning. But the wishes, both of parents and tutors, were very much frustrated by the spirit of intolerance. Harassing processes in the spiritual court were undertaken against those who presided over these institutions, and some of the most eminent instructors of youth were compelled to discontinue their labours. The ostensible ground of these proceedings was the oath taken at the university on occasion of obtaining degrees, which was interpreted to mean, that they bound themselves not to undertake schools or private academies; but the real source of the interdiction was, hostility to their non-conforming principles. They defended themselves, however, against the allegations of their enemies with great resolution and unanswerable arguments,\* so that some of the most candid of their episcopal opponents concurred in the more liberal interpretation of the oaths.

One of the earliest and most excellent of the non-conformist academies was that which was conducted by Mr. WOODHOUSE, in the manor-house at Sherriffhales, near Shifnal, in Shropshire, and obtained considerable celebrity in the reign of Charles the Second. Some of the most distinguished families of the county sent their sons thither for education, many of whom afterwards appeared in the world as men of rank or political importance. Mr. Woodhouse was not, like many others of the dissenters, in necessitous circumstances, but he seems to have adopted this course of life, partly to gratify his own literary taste and to indulge his studious habits, and partly to render a service to that community with whom he stood in immediate connexion. As a tutor he is reported to have displayed great ability and diligence; assiduously and effectively directing the theological pursuits of his students, cultivating piety as well as imparting learning, and securing a perfect influence over his pupils by the happy combination of unrelaxing discipline, with courteous and conciliating manners. The plan of the institution comprised the following method; from which we may perceive the advantages the institution derived from the preceptor himself having enjoyed early and free access to the

\* The history of these circumstances, and the arguments, are given in Calamy's Continuation, vol. i.

fountains of national instruction. Lectures were read by him in Logic, Anatomy, and Mathematics ; these were followed by others in Natural Philosophy, Ethics, and Rhetoric. The Greek and Hebrew languages were also assiduously cultivated. While theological reading was particularly marked out for Divinity students, those who were designed for the law had an appropriate lecture once a week. The authors used as text books were strictly explained, and at least the subject matter impressed on the memory. An account of the preceding lecture was required before another was read, and on Saturday a review was given of the five lectures of the week. Every author was read three times, and the students exercised each other by questions and problems on the most difficult points. On one day of the week Latin, Greek and Hebrew nouns and verbs were declined in the lecture room ; logical disputations were held on a Friday afternoon ; English composition was taught in the form of letters and speeches, and the theological pupils were required to analyse verses of the Bible, to compose sketches of sermons and schemes of prayer and devotional specimens, according to the method of Bishop Wilkins. In addition to their general course of study, all the classes were exercised at times in land surveying, dialling, making almanacks, and dissecting animals. It is unnecessary to give a minute account of the books that were employed, many of which, in the subsequent progress of knowledge, passed into disuse. Among the most distinguished persons who received their education in this seminary were the two sons of Sir Edward Harley, of whom Robert, afterwards Earl of Oxford, became both a celebrated statesman and promoter of learning. Lord Bolingbroke, so well known as a writer and as a politician, was one of the pupils. We find also the names of several eminent divines.

The seminary of Sheriffhales was continued for some time by Mr. JOHN SOUTHWELL, nephew of Mr. Richard Southwell, who was ejected from Baswick, in Staffordshire. The names of two of his pupils survive,—Mr. Thomas Leavesly and Dr. William Harris, of whom the latter is the most distinguished. Dr. Harris was minister of the Dissenting congregation in Crutched-Friars during the long period of forty-two years. He was considered to be the best English scholar among the dissenters, and his compositions the most finished that proceeded from their body. He was, indeed, highly celebrated both as a preacher and a writer. In the latter character he took a prominent part in the deistical controversy with Woolston and Collins.

Another of the institutions, which may be regarded as the offspring of non-conformity, was the academy of Mr. MATTHEW WARREN, a gentleman of fortune, who was ejected from the chapelry of Downhead, in Somersetshire. After suffering numerous annoyances during the reigns of Charles II. and James II. he was for many years at the head of a prosperous academy at Taunton. He is said to have possessed, in an eminent degree, the art of explaining subjects in a clear and convincing manner to persons of the meanest capacity; but having been educated in the old school of logic and philosophy, he contented himself with lecturing on such text books as *Burgersdicius* and *Eustachius*. He encouraged his pupils, however, in the private study of *Locke*, *Le Clerc*, and others. He was ranked among the moderate divines of the day, being neither rigid in his opinions, nor unwilling to yield to argument. He encouraged, to the utmost of his power, the free and critical study of the Scriptures. He died in the year 1706.

The most distinguished of Mr. Warren's pupils was Mr. Henry Grove, who was the son of parents and the descendant of ancestors on both sides remarkable for their attachment to religious liberty, and the rights of conscience. His precocity of talent introduced him into this seminary at the age of fourteen; whence he removed to London to prosecute his studies under Mr. Rowe. In the year 1706, he succeeded his tutor in the academy at Taunton, having already acquired considerable reputation as a preacher. In this place he continued his ministrations for eighteen years, among two small congregations, whose united efforts for his support did not produce more than twenty pounds per annum. He is well known as a writer on many subjects in divinity, and as a contributor of several numbers in the *Spectator*. About the year 1718, he added to his labours as tutor in moral philosophy, those of instruction in mathematics and natural philosophy. In 1725, he became divinity tutor, and discharged that important office with exemplary zeal and fidelity. In him extensive learning, sound judgment, and a vigorous imagination were remarkably united; so that his death, which occurred in 1737, was lamented as a great public loss.

The third institution of celebrity among the earliest non-conformists, was that of Mr. CHARLES MORTON. This eminent man was descended from an ancient family at Morton, in Nottinghamshire, formerly the seat of J. Morton Secretary to Edward III. He received his education at Wadham College, Oxford; and was ejected from the rectory

of Blisland, in Cornwall. He then removed to a small tenement, his own property, in the parish of St. Ives, where he resided till the fire of London. The earnest solicitations of many friends, who were confident in his peculiar qualifications as an instructor of youth, induced him to open an academy at Newington Green, where he displayed eminent capacity, and enjoyed great success. Mr. Morton drew up systems of the different arts and sciences for the use of his pupils, which they were required to copy, and which he elucidated and enlarged in lectures. One of these, entitled *Eutaxia*, on the principles of government and public policy, has been esteemed a work of great merit. He also prepared a compendium of logic, which was the text-book, in the College of Harvard, after he became vice-president of that American university. It was in the year 1685, that he emigrated to New England, in consequence of processes in the ecclesiastical courts with which he was harassed. Though not absolutely compelled to this measure, yet his apprehensions respecting the state of the nation were such, that he went abroad to escape anticipated evils. In America he was chosen pastor of a church in Charlestown, opposite to Boston, and vice-president of Harvard College. He died in April, 1697, at the advanced age of seventy-nine.

A fourth non-conformist institution was undertaken by Mr. RICHARD FRANKLAND. He was born in 1630; and after having received classical instruction at a celebrated school at Rathmill, in the west Riding of Yorkshire, he matriculated at Christ-church, Cambridge, in 1647. From the university, where he took the degree of Master of Arts, he went to reside for a short time at Hexham; and preached successively at Haughton-le-Spring, Lancaster, and Bishop's Auckland. He was presented to the valuable living of Auckland, St. Andrew's, by Sir Arthur Haslerig. When Cromwell erected a college for academical instruction at Durham, in 1657, Mr. Frankland was chosen tutor—an office which perished with the institution itself at the restoration; afterwards, when driven from his living by the act of uniformity, he retired to his own estate at Rathmill, where he was persuaded to open a private academy. In the course of twenty-nine years he imparted the benefits of a liberal education to three hundred youths: during this period, indeed, circumstances induced, or compelled him to a frequent change of residence; but he never suspended his scholastic labours. In 1674, an invitation to become minister of a congregation, drew him to Natland, near Kendal, in Westmoreland; but he was forced by the harassing operation of

the Oxford, or Five Mile Act\*, to remove, and lived successively at Dawsonfold, in the same county ; Harthill, in Lancashire ; Calton in Craven, in Yorkshire ; Attercliffe, near Sheffield ; and, finally, again at Rathmille. He was not only distinguished in public life as a divine, and in private life as a man of great modesty and virtuous conduct, but he had also the reputation of being an able mathematician.

Among the numerous pupils of this seminary, we may mention one or two, whose lives were more particularly connected with the history of the times in which they lived. Of this class was Mr. John Nesbit, a native of Northumberland ; born October 1661. His public avowal of attachment to the Protestant religion, in the presence of the Duke of York, afterwards James II., exposed him to severe trials. Scarcely had he commenced his studies in the university of Edinburgh, when he was compelled to retire into a foreign land. But on his passage to Holland he was seized and committed to the Marshalsea prison, where he dragged out a wretched existence in irons for four months ; yet neither sufferings, nor solicitations on the part of the king, could induce him to betray others, or degrade himself. He died in the sixty-seventh year of his age, having been pastor of the congregation in Hare-court, Aldersgate-street, thirty-three years. Mr. James Woods, born in 1691, was the son of an ejected minister of the same name, and settled with a congregation of dissenters in Lancashire, with which he continued till his death, in February, 1759. At the time of the rebellion, in 1715, he headed a body composed of the most robust and brave men of his congregation, armed with agricultural implements ; and marching them towards Preston, secured possession of Walton-bridge, by the order of General Wills. This conduct was acknowledged by George I., and the reverend patriot was ever after called General Woods. Mr. David Some deserves to be mentioned, on account of his connexion with the celebrated Dr. Doddridge, as well as his own eminent merit. He was settled at Market Harborough, and undertook the superintendence of a small church at Kibworth, in conjunction with his own, and in association with Doddridge. He was a person of remarkable acuteness

\* The Oxford, or Five Mile Act, was passed, in 1665, in the reign of Charles II. It imposed an oath on all non-conformists, that no alteration should be attempted in church or state ; and provided, that all ministers who did not take the oath should not come within five miles (except in crossing the road) of any borough, city, or corporate town ; nor within five miles of any parish, town, or place, wherein they have, since the act of oblivion, been parson, vicar, or lecturer, under a penalty of forty pounds, and being incapable of teaching any school, or taking any boarders or tablers to be taught or instructed.

of judgment, and is known as chiefly active in overruling an attempt which was made in 1723, to introduce subscription to articles of faith, as a test of orthodoxy, when the subject was much agitated in London.

An academy of note was established by Mr. DOOLITTLE, of Pembroke Hall, Cambridge, who was ejected from the rectory of St. Alphage, London Wall. He began with a school in Moorfields; but, upon the breaking out of the Plague, removed to Woodford Bridge, on Epping Forest. On a license granted by Charles II., in 1672, he removed to Islington, where he formed an academy to educate young men for the ministry, in which he was assisted by Mr. Vincent, of Christ Church, Oxford, ejected from St. Mary Magdalen, Milk-street, London. He was, besides, pastor of a numerous congregation in Monkwell-street. Upon the passing of the Oxford Act, he removed to Wimbledon, where his instructions were continued, but in a more private manner. Several persons of eminence were among his pupils, as Mr. Henry Chandler, father of the celebrated Dr. Samuel Chandler; Mr. Thomas Emlyn, of whom a large account may be found in books of general biography; Dr. Thomas Ridgley, who became an eminent tutor, in conjunction with Mr. Eames, in an academy in London, founded by the Independents; and Mr. Edmund Calamy, 'celebrated for the respectability of his character, the weight of his influence, his controversy with Bishop Hoadly on the principles of non-conformity, and numerous publications, particularly the Abridgment of Mr. Baxter's Life, and a continuation.' (Toulmin's Hist. View. App.)

MR. JOHN SHUTTLEWOOD, A. B., of Christ College, Cambridge, who was ejected from Raunston and Hoose, kept a seminary at Sulby, and at Little Creton, in Northamptonshire. He was distinguished as a preacher, as well as a tutor, and is considered as the founder of the dissenting body in that part of the kingdom. He was a great sufferer for his non-conformity, both in person and property. Several of his pupils became respectable for their theological and literary attainments, though few of them were very eminent.

MR. SAMUEL CRADOCK, B. D., fellow of Emanuel College, Cambridge, was ejected from the rectory of North Cadbury, Somersetshire. His ministerial labours were gratuitously bestowed on the neighbourhood in which he resided, Wickham-Brook, in Suffolk. He was successful in his academical instructions, which comprised Logic, Natural and Moral Philosophy, and Metaphysics, as well as Divinity. He adopted the method, which appears to have

been general in academies at that period, and has been very frequent since, of requiring his students to copy his Lectures. Dr. Edmund Calamy was one of them, and has recorded his approbation of this method, which others have deemed a useless drudgery. On the whole, perhaps, this method may be regarded as advantageous to the scholar, especially in the study of Theology. If the Lectures of the tutor have been judiciously prepared, constituting rather an outline of the subject, than an elaborate disquisition upon it, and pointing to the sources of further information, it appears to us that the pupil may gain substantial assistance, and of the most valuable kind, by being permitted to transcribe the well digested preparations of his teacher. Besides Dr. Calamy, several excellent divines were educated in this institution, and some gentlemen of rank and influence, as Sir Francis Brickley, of Attleborough, Norfolk ; Charles Lord Fitzwilliam, of Moulsham-hall, Essex ; and Timothy Goodwin, who was an excellent Greek scholar ; and who, though originally educated with a view to the medical profession, afterwards devoted himself to theology, took orders in the church, accompanied Lord Shrewsbury, lord lieutenant of Ireland, as chaplain ; was first bishop of Kilmore and Ardagh, and, finally, archbishop of Cashel.

Besides those who have been enumerated, many others devoted themselves to the education of youth for the Christian ministry, whose names have been preserved with honour. We may subjoin a few. Mr. Nathaniel Taylor pastor of the church formerly at Salters' Hall, and, on account of his wit and vigour of expression, called, by Dr. Doddridge, the dissenting South ; Mr. Philip Henry ; Dr. Theophilus Gale, who left all his real and personal estate for the education of poor scholars ; Dr. Obadiah Grew ; Mr. Ralph Button, B. D., canon of Christ Church, Oxford, and orator of the University, who lost both his preferments at the Restoration ; in early life he was an eminent tutor in Exeter College ; at the breaking out of the civil wars he had been elected professor of Geometry in Gresham College : he died in 1680. The names of Benjamin Robinson, Henry Hickman, B. D., and Thomas Cotton, M. A., are worthy of remembrance, each, in his day, having accomplished much, both in public and private tuition, and having acquired considerable celebrity.

The preceding enumeration, which comprehends extinct academies, will show that the early non-conformists, and their immediate successors, conferred a great benefit on the body to which they attached themselves, by cherishing the

spirit, and diffusing the love of learning among their contemporaries. The result was, that the separatists from the Church of England sent forth, from the midst of them, statesmen, physicians, and divines of eminence. Their newly constituted church, especially, was enlightened by literature, supported by wisdom, and adorned with religion. The effect, however, of excluding their successors from the places of public instruction, was, at length, detrimental to their learning, and injuriously affected their opinions. A prejudice against academical institutions crept in; and, notwithstanding the partial provisions (for they are only partial and very limited) which have been made for the instruction of youth, particularly of the class devoted to the Christian ministry, this prejudice, amounting even, in some cases, to direct hostility, has ever since existed, to a considerable extent, among some denominations of the non-conformists, or dissenters. But another and a better feeling has, of late, prevailed; and the progress of mental cultivation, and the diffusion of general knowledge, bid fair to exterminate, at no distant period, all remaining hostility both of sentiment and conduct.

In another Number we shall give an account of more recently established academies.

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#### POLYTECHNIC SCHOOL OF PARIS\*.

OUR object in this article is, by combining and arranging the information contained in the works mentioned in the note, to give an account of the history, objects, and courses of study of the French Polytechnic School. In reading the first on the list, it is necessary to consider that it was written under the late government by an officer of the institution; we may, therefore, without prejudice to the writer, allow ourselves to suppose that it cannot be altogether what he would have written had his work been commenced since the new era, and we must receive the whole as a history of the Polytechnic School as tolerated by Charles X. and the government in the year 1828.

\* *Histoire de l'Ecole Polytechnique, par A. Fourcy, Bibliothécaire et Membre du Conseil d'Instruction de cette Ecole, &c.* Paris, 1828.

*Notice sur la Crédation de l'Ecole Polytechnique, par M. Hachette.*

*Prospectus de l'Ecole Royale Polytechnique;—Ministère de l'Intérieur.*

*Programmes de l'Enseignement de l'Ecole Royale Polytechnique pour l'année scolaire, 1829—1830.*

The second on the list is a very short notice of the different organizations of the School by M. Hachette, who, to his many titles of real distinction, adds that of one of the original Professors of the Institution in question. The other two are official documents, whose titles explain themselves.

The object of the Polytechnic School is, to provide a continual supply of men capable of directing all public undertakings, whether civil or military, for the management of which science is necessary. Monge, in 1791, proposed a plan for the formation of a public school of science, into which should be admitted only the most distinguished pupils of the ordinary seminaries. Talleyrand and Condorcet, about the same time, proposed to the government the education of general engineers on a large scale; but the troubles of 1793, while they deferred the consideration of the question, rendered some measures more than ever necessary, by the stoppage of all the existing opportunities of acquiring scientific knowledge. Among those which circumstances had rendered inefficient was the School of Artillery, which had been re-established in 1790 by the National Assembly, and placed at Chalons-sur-Marne, avowedly because that place contained neither artillery, garrison, nor fortification! The School of Military Engineers at Mézières, where Monge first taught the descriptive geometry which he had invented, was removed to Metz, in 1794. It is then represented by the Committee of Public Safety as completely disorganized, and the institution as totally destroyed. In fact, the number of military engineers was so little adequate to the increasing wants of the war, that the Convention found it necessary to supply the army from the School for Roads and Bridges (*Ecole des Ponts et Chaussées*). This latter school, founded in 1747, differed materially from the rest in its constitution. It had no professors belonging to it: its pupils were sent out of doors to hear the lectures of the different teachers; while at home the better informed students instructed the rest. The sudden call for all who were any ways fit for military duty to join the army put of course a complete stop to the operations of this school. That of Naval Engineers had been shut up on the suppression of the Academy of Sciences. There was nominally an 'Ecole des Mines,' but all practical knowledge was only to be obtained abroad. There was a corps of 'Ingénieurs Géographes,' but no place was appropriated for their instruction. Great pains were taken in this department with the pupils of the Military School of Mézières; they were, however, forbidden by ordonnance from applying the knowledge thus gained to their own branch.

Such was the state of these most essential departments of public instruction at the beginning of 1794. Lamblardie, led by the stoppage of the Ecole des Ponts et Chaussées, of which he was director, to turn his attention to the means of preparing new materials in his department, conceived the idea of forming a large institution where engineers of all descriptions might receive the scientific knowledge which is the basis of their respective arts. He communicated this notion to Monge, who, it appears, had already entertained the same, and who entered into his views with ardour, and communicated them to the Assembly of Savans, who, as is well known, occupied themselves with endeavouring to forward by new inventions the backward state of the military preparations. On his representation it also met with a favourable reception from the Committee of Public Safety. In this body were Carnot and Prieur-Duvernois, or Prieur de la Côte d'Or; both formerly pupils of Monge, who were pleased with the idea, and exerted themselves to put it in execution.

It happened well for the undertaking that the Convention had just appointed a 'Commission des Travaux Publics,' intended to overlook the different public undertakings, which had hitherto been divided among the ministers of the interior, marine affairs, and war. This committee appropriated the buildings attached to the Palais Bourbon, in which it held its meetings, to the new establishment. The collection of apparatus was immediately commenced, and Fourcroy was employed to draw up a report on the nature of the intended plan, to be presented to the assembly with the *projet de loi* for its execution. This was just after the fall of Robespierre. The Convention was not disposed to receive anything unaccompanied by abuse of the system which had just terminated, and had its thoughts full of the warlike preparations which were at that period more than ever necessary. To gain a hearing, therefore, Fourcroy charged the late government with a conspiracy against education, and a determination to destroy all arts, sciences, and learning. He asserted that it was their dearest wish to strip France of her generals, engineers, and sailors, to deprive her forts and harbours of all means of defence, and render her an easy prey to her enemies. He then shewed the utility of some such institution as a nursery of the art of war, which then so completely occupied the government and people, that even in representing to them the necessity of promoting agriculture, it was as a means of *victualling the army by sea and land*. The report then proceeded with the method of instruction proposed, and declared it as the object of the new establishment to form

engineers of all descriptions, and to re-establish the teaching of the exact sciences, which the revolution had suspended. It was proposed, that the students should be employed three years, those of each year forming a distinct class. But as the public wants were pressing, it was recommended to take the best qualified students from all quarters, and by means of short courses, to bring as many of them as it was possible to such a state of information as would enable the three classes to commence at once. This, in the days of equality, it was thought necessary to excuse, on the ground of imperious necessity, otherwise it might have been required that the students should have been levied in the same manner as the army, by equal distribution of their number among the different departments. It was also considered necessary to grant a salary to all the students for their maintenance ; and it was recommended that they should be boarded in small numbers with private citizens, instead of being all collected in one building.

This report was received without opposition Sept. 28, 1794, and was followed by a law, fixing the opening of the school on the 30th of November. Lamblardie, who originated the idea, was appointed director. The qualifications required in candidates for admission were previous good conduct, attachment to republican principles, a knowledge of the elements of arithmetic, algebra, and geometry ; the candidate was required to be between 16 and 18 years of age. Twenty-two towns were named in which the examinations were to be held, and to each of which an examiner was appointed. These were required to attend, not to the information exhibited by the candidates, but to their intelligence ; and this, at a time when the Republic, hard pressed on every side, might have been supposed willing to prefer the slightest degree of practical knowledge to any talent whatever. Three hundred and forty-nine students of all ages, from twelve to twenty-five years, were admitted ; and by the end of November the plans of instruction, &c. were arranged. Of these we proceed to give a slight account. In mathematics the students were supposed to know already the elements of geometry and algebra. Their attention was therefore turned immediately to analysis and descriptive geometry. The former was principally confined to the elements of, 1. Geometry of three dimensions. 2. Mechanics and hydrostatics. 3. The effects of machinery. The latter was applied to the arts of design, architecture, and fortification ; the first containing the cutting and arrangement of stone and wood in building ; the projection of shadows ; perspective, both with regard to the apparent form

and tints of objects ; the formation of maps and plans, and the operations of surveying, which it was intended the students should be sent into the country to practise ; also the drawing of machinery, both simple and compound. Under the head of architecture we find the construction of roads, bridges, canals, and ports ; the plans of mining operations, the ordinary processes of building, *and the decorations required for public festivals*. In fortification the general principles of the method were to be taught, in addition to the construction of works, and the operations of attack and defence. In physics the course was divided into, 1. General physics, containing what is usually known under that name, and the general laws of chemistry. 2. Chemistry, containing all particular phenomena, with their application to the useful arts. The art of drawing was also taught. The time was divided in the following way. Out of 100 parts, 50 were given to descriptive geometry and its applications ; 25 to physics, chemistry, and their applications ; 8 to mathematical analysis and its applications ; and 17 to drawing, &c.

Without going further into detail, we may notice one or two remarkable points in the first design.

1. The appointment of what were called ' chefs de brigade,' and ' aides de laboratoire ;' these were pupils who were to be selected from among those who had finished their studies. One was to be attached to each brigade of students, as it entered the school, and was to continue with them throughout their whole course. Their duty was to explain what was difficult to those under their charge, and to be always with them in the hours of study. The ' aides de laboratoire' had the same duty to perform in the laboratories of every description. These officers were chosen at first from among the more intelligent students, and were prepared for their duties by additional instruction.

2. The arrangement of the hours of study. These were varied by the alternation of oral lectures and practical applications. This system is followed to the present day, and it is probably owing to this that so much time can be devoted to study as is the case. The students are employed not less than twelve hours a day.

The whole management was placed in the hands of a council, consisting of the professors and their adjoints, the director, two sub-directors, and a secretary. One of their number was chosen monthly, by ballot, as inspector and president, and he could not be re-elected until after an interval of a month. In addition to all the duties of management, this council was charged with the extension and improvement of the sciences and arts taught in the institution.

To their two-fold occupations the members immediately proceeded with Lagrange for their president, mixing up debates on the management and organization of the institution, with experiments on the congelation of mercury, until Monge, who succeeded to Lagrange, found it necessary to appropriate different sittings to these different objects.

Among the names of the original professors we find those of Lagrange, Prony, Monge, Hachette, Fourcroy, Vauquelin, Berthollet, and Chaptal. The first of these, then at the head of European mathematicians, gave a celebrity to the opening of the courses which has fallen to the lot of but few similar institutions, by delivering lectures on the elementary branches of mathematics. But, while all seemed going on prosperously, the students, who were not exempt from the service of the national guard, were called on to lend their assistance in protecting the government from the factions by which it was menaced in May, 1795! To add to the confusion, the salary granted to the students, which, though nominally sufficient, was not really so, in consequence of the depreciation of the assignats, was found inadequate to the supply of their daily wants. The government began to hesitate as to the possibility, or at least the expediency, of maintaining such an establishment. The system of instruction, and the expense at which it must be supported, were disapproved of by many.

These objections were answered by Prieur de la Côte d'Or, in a memoir presented to the public Committees. An additional argument was derived at this period in favour of the Institution, from the appearance of the first number of the Journal Polytechnique. This work was intended to contain the description of the methods of teaching, and the account of discoveries and experiments made by the various members of the school.

On the first of September, 1795, some alterations were made in the organization of the establishment. Its name was changed from 'Ecole Centrale de Travaux Publics' to 'Ecole Polytechnique.' The preliminary knowledge required from candidates for admission was increased. In addition to a greater quantity of algebra, trigonometry, conic sections, and the application of algebra to geometry were required; and examiners, not connected with the school, were appointed to decide on the relative merits of the aspirants. It was also decreed that all who, in the first year of their studies, did not accomplish two-thirds of the course marked out for them, should be obliged to retire from the school, with the permission, however, to present themselves for re-admission after the lapse of a year. The school was shortly afterwards placed

under the authority of the minister of the interior, and the courses were so arranged, that all who, at the end of the second year, were not marked out as military engineers or engineers of roads and bridges, were transferred to the schools connected with their respective arts.

During the first year of its existence, the Polytechnic School had many disadvantages to contend with. Some have been already mentioned, in addition to which the buildings connected with the Institution were so far from completion, that the professors were in some instances obliged to give their instructions while the workmen were at dinner, and the coast was clear. The cold of a remarkably severe winter, the want of provisions, and consequent diseases, the continual impulse of party fury, threatened its existence from day to day, and its survival proves the wisdom and energy with which its affairs were conducted. Even in our day, it was judged necessary to disband the students after the events of last July, and to suspend all study until the excitement had a little subsided. But in 1795, every day was one of insurrection, and the students, as might have been expected were to be found on various sides. The second year opened more quietly. The ordinary seminaries of instruction had been re-opened ; many students, who had quitted the school from distressed circumstances, were allowed to return ; it had already acquired some reputation, as appeared from the desire manifested by the other schools, mentioned in the preceding part of this article, to obtain permission for some of their students to finish their education in it. Some changes were made in the administration, of which the principal was that the director was made the permanent president of the Council of Administration. He was, with all other officers, to be elected by the council ; the approbation of the minister of the interior being necessary to the appointment of those only who were *ex officio* members of the council. The Journal Polytechnique was required by law to be published every month, with the objects before-mentioned. This regulation was the more necessary, as the re-establishment of the Academy of Sciences rendered this Journal no longer the only one through which new discoveries could be propagated. The school was now in high favour with the government, notwithstanding the fact of the students having on one occasion taken part with the people against it, and the necessity for the expulsion of two students, which arose out of their refusal to take the oath of hatred to royalty. Nevertheless the state could no longer afford the expenses incident to an establishment on so large a scale ; reductions were

made in several of the departments of education, and the council, finding money no longer at their command, were obliged to have recourse to barter. Thus a quantity of platinum was obtained in exchange for some chemical apparatus, and on another occasion it was procured on condition that part of it should be returned in plates; and Guyton de Morveau consented to this employment, ‘plus industrielle que scientifique,’ as M. Fourcy phrases it. Two skeletons were taken in payment of some advances made for the School of Medicine. An ill-directed economy cramped the whole system of instruction; the students were reduced to three hundred; many necessary situations were abolished, and in 1797 the whole revenue of the school was fixed at 300,000 francs. In addition, what was called the Central Committee of Fortifications, in two reports to the minister of war, complained at great length of the exclusive privileges as they were called of the Polytechnic School, and of other points connected with its management, making at the same time propositions for its regulation. These were submitted to the Directory with an answer from the minister of the interior, the council of the school concerned having declined that task. The result was the following alteration in the design and mechanism of the institution. Three-fourths of the students were obliged to choose, at their first entrance, the department to which they would attach themselves, the number of these in each service being fixed. The total number was reduced to two hundred. The examinations for admission were to be printed beforehand, and distributed in the departments. Those students, who at the end of two years were not fit for removal into their respective schools of practice, were allowed only one year more to qualify themselves. Almost at the moment when these changes were made, the courses of fortification and architecture were abolished; and that in the middle of an academic year when all their details were in full operation. The school was at the same time accused of aristocratic feeling and incivism, which charge it was thought necessary to disprove by planting a tree of liberty within its precincts.

The Council of Five Hundred, at the end of 1797, had completed a system which they proposed to the Directory through Prieur. In his report he again insists strongly on the advantages of the institution, particularly in a point which is not sufficiently considered in our systems of education, namely, the variety of occupation and the alternation of works of the head and hand. As their whole proposal was rejected by the ‘Conseil des Anciens,’ it is not necessary to enter into its

details, further than to observe the nature of the objections which ignorance or mistaken political principle raised to it. One man in the Council of Five Hundred deprecated the use of the Greek alphabet in mathematical investigations; and many agreed in imagining, that the entrusting of public duties to those who by their education had been qualified for them above all others was a breach of the principle of equality. The School proceeded nevertheless. Some of the courses which had been suppressed were re-established, and in spite of new attempts to harass the students on account of their political opinions, which succeeded so far as to procure the expulsion of four who were suspected of incivism, public opinion set strongly in favour of the establishment. Bonaparte, after his Italian campaigns, was often present during the hours of instruction, and thirty-nine of the élèves accompanied him to Egypt, of whom seventeen were in the celebrated commission, of which Monge was at the head. The students began to shew the talent which has since rendered the names of many of them illustrious. One in particular, then not eighteen years of age, ventured to transmit to Lagrange some ameliorations of his method of developing the Binomial Theorem, which that most eminent man read publicly at the next lecture, declaring his intention of profiting by them in future. This student was Poisson, who is now among the very first analysts in Europe.

New troubles and the institution of the conscription had well nigh overturned the establishment. It was against the principles of equality to turn every man to that for which he was most qualified, accordingly ninety students were pressed as private soldiers. The well-judging foresight, which required at the commencement of the school, that the best made and not the best filled heads should be preferred, was no longer to be found in those who directed public affairs, and ninety voltigeurs were raised at the expense of as many well instructed officers of artillery or engineers. All that could be obtained for them was that those who had the requisite height should be made cannoneers, and that those whose regiments happened to be in garrison at Paris should be allowed to continue their studies.

The Council were in the mean while vigorously occupied in perfecting the system of instruction. There is not room for details, but it is useful to know the proportions in which the different branches of study were cultivated. For the year 1800 they were as follows in the following branches:—First year, analysis, 85; descriptive geometry, 120; elements of machines, 18—Second year, analysis, 40; mechanics 80; fortification,

60; architecture, 36; mining, 18. The principal discussion which took place was upon the question of what was called the exclusive privileges of the Ecole Polytechnique. It was not that all citizens of the republic were not equally eligible for admission, or that any thing but talent and industry was required to be shewn in the final examinations; the government argued, that because some might possibly qualify themselves at some future period for public offices, by private education, or in other schools, that therefore the course marked out by experience and justified by the most ample success should not be incumbent on all. As a general principle in ordinary cases, there is more to be said on this side than on the other, but the particular circumstances in which France was then placed would, if any thing could, have justified a departure from the method of free competition. As it was, the privilege was abolished which was the principal feature of the organization of 1799.

It would not be interesting to our readers were we to mark the less important changes which took place in times of internal quiet. We shall proceed to notice the few circumstances of the future history, which will excite attention. In 1800 the great object of the institution, that of supplying a sufficiency of well qualified men for the public services, was judged to be so far fulfilled, that the First Consul offered commissions in the line to the superabundant candidates, and in 1804 this offer was even extended to those who, though sufficiently prepared, could not be admitted into the school for want of vacancies. The Institution itself always received protection and support from Napoleon, though it is remarkable that, from the period of his consulship, he never visited it once, until after his return from Elba. It was esteemed highly in foreign countries, and at the treaty of 1803 between France and Switzerland, it was stipulated that twenty Swiss youths should be admitted to participate in its advantages. The same year was marked by a circumstance highly characteristic of the ardent temper of our neighbours. The invasion of England was contemplated. The students presented a memorial to the consul, praying 'que les élèves de l'Ecole Polytechnique soient au moins représentés dans *la grande action*,' and offering to construct a gun-boat with their own hands, and at their own expense. Their offer was accepted; and the consul, being well pleased to turn their attention to naval architecture, directed that theoretical instruction should be mingled with the progress of the work. In the words of M. Fourcy, 'the school became a workshop, the library was filled with models, and other places with blacksmiths and sail-makers.' The vessel thus constructed was called *La*

*Polytechnique*, and was actually launched, under the command of a student of the school. The whole circumstance is remarkable, as affording a proof how soon such instruction as is given in the Polytechnic School may be converted to practical purposes.

The years 1804 and 1805 were partly occupied in deliberations on the manner of making several proposed changes of great importance. The Emperor had decreed that the students should be all placed in one building, instead of being distributed in private families. The reasons for this determination are supposed to have been some riots which took place at the theatres and elsewhere, in which a few of the students bore a part. The 'College de Navarre' was fixed on as the future school, but it did not become so until November 1805. It was also settled that in future each student should pay a fixed sum yearly towards his board and other expenses, with the exception of a certain number of those whose circumstances were not sufficiently good. The institution of 'chefs de brigade,' already mentioned, was found not to answer its end as a means of preserving order, on account of the impossibility of exercising a real influence on the students by means of those so little older than themselves. This was remedied by placing over the 'chefs de brigade' other officers, entitled 'chefs d'études,' who were to be chosen from among those whose education had been completely finished. The whole institution was then put under military discipline, and from this time its existence in its present form may be dated.

One remarkable fact may be stated, as tending to shew that habits of hard study have no necessary tendency to shorten life. At Paris the average of deaths between the ages of 18 and 21 is 1 out of 80. From the commencement of the school till 1805, during which the students had to contend with disease and famine, in addition to their daily toil, the average of deaths was 1 out of 73. From 1806 to 1816 it was, on the contrary, 1 out of 119, and from 1816 to the present time it has been only 1 out of 220.

We may now notice the number of excellent elementary works in various departments of science, which have proceeded from the Ecole Polytechnique. At the head of these stands the 'Géométrie Descriptive' of Monge, which for clearness, arrangement, and beauty, has in our opinion never been surpassed. Of the following, some are, and all ought to be, well known in this country. The application of Algebra to Geometry, by Monge and Hachette; Course of Fortification, by Gayvernon; Differential and Integral Calculus, by Lacroix; Treatise on Physics, by Haüy; Mechanics,

by Poisson ; Mechanical Philosophy, by Prony ; on the composition of Machines by Lanz and Bétancourt ; the Theory of Functions, by Lagrange ; the Treatises on Chemistry of Thenard and Fourcroy ; and on Geodesy, by Puissant. The Correspondance sur l'Ecole Polytechnique is a monument of considerable interest. It was undertaken in the year 1804 by M. Hachette, and continued for twelve years. It is filled with scientific articles, the productions of members of the institution, and with notices of all facts which could in any way interest them. There are also many works written expressly for the studies preparatory to admission, many of them excellent, and few below mediocrity. In this point of view the Ecole Polytechnique must be considered as having benefited the whole civilized world. That it has filled the French armies, and other public services with efficient engineers is sufficient to entitle it to the admiration of a Frenchman ; but in addition, it has most materially forwarded the art of elementary writing, and has both advanced, and rendered more easy those sciences, which are connected with its professional objects. Nevertheless, in giving instruction upon such an extensive scale, it was found hard to ensure that all should combine rapidity of progress with the necessary recollection of preceding subjects. The difficulty was increased by the Council of the Polytechnic School not having it in their power to choose for the public service, from a large number of students, on whom trial of the system had been made. The whole school hardly supplied the necessary candidates for every office ; thus all who were admitted were sure, provided their talents and industry came up only to the average, of being employed in some public line, which certainly most materially checked the force of emulation. Complaints were made by the Council of the Schools of Engineers at Metz, which from the beginning had regarded the Polytechnic School with a jealous eye, that the candidates for their department were ill instructed. Much discussion took place, which was terminated by an examination of six of the pupils, of whom half only answered well. This was not thought sufficient ; and to remedy the evil, the students of the second year were subjected weekly to examination in the subjects of the first, and the programmes of the courses of lectures were examined with the utmost care, in order to strike out whatever might not be absolutely necessary for application to practice. The other public schools had nevertheless declared themselves satisfied with the students of the Ecole Polytechnique, and the benefits of the extent of education which they received had been sensibly felt in various places. Thus both

military engineers, and those of roads and bridges, had been taken to Egypt, direct from the Polytechnic School, without any further study or practice. In Portugal, officers of artillery had been employed in the formation of roads, &c.

The events of the war, from 1810, to 1814, exercised the same influence on the school as on the rest of France. The civil departments were allowed to remain nearly altogether unsupplied, while the education of each individual was hardly half completed before he was required to join the army, whatever might have been his previous destination. So certain was any display of talent of forcing upon the owner an engineer's commission, that all who did not choose a military life were obliged to conceal their knowledge. It was indeed in the power of any one to give in his resignation as a student, but a conscription for the ranks awaited him at the door, and no choice was left except between the epaulette of an officer, and the musket of a private soldier. But, whatever might be the feelings of the students in general, with regard to military pursuits, or their disposition for foreign warfare, as soon as France appeared in danger of invasion, the whole body offered their services to fight in the ranks. Napoleon refused their offer, alleging that he was not yet reduced to such extremity as to kill the hen which laid him golden eggs. Nevertheless, when his affairs were become desperate, he offered to place the students in the ranks of the guard. He was however persuaded by the managers of the school, to form them into a corps of artillery. This little body behaved with the greatest courage in the action under the walls of Paris, March 30, 1814, where eleven were wounded and six taken prisoners. At the return of Napoleon, they were again formed into a company of artillery, and did not resume their studies till after the final restoration of Louis XVIII. The excitement of the times was, however, prejudicial to the discipline of the school. On the 12th of April, 1816, a very slight matter put the students into a state of open rebellion against their superiors, which was settled next day by the expulsion of the whole body, by a royal ordonnance, with leave, however, to be examined for admission into any of the public schools of engineers, after the lapse of a year. The school was re-established in the September of the same year, which charge was entrusted to a commission headed by Laplace, and was placed under the protection of the Duc d'Angoulême. Its military organization had been abolished at the restoration, and continued so till 1822, when it was thought advisable to re-establish it, as a check upon the deliberations of the students, which had several times led to breaches of disci-

pline, and a means of hindering a system bearing some little resemblance to flogging, practised in our public schools. This, far from being regarded as a most excellent system, as it is by some amongst us, was considered by the 'Conseil de Perfectionnement,' as of ruinous effect upon the progress of the students, and it was seriously deliberated whether it would not be advisable to render it impossible, by returning to the former system of boarding the students in private families. The military organization which was introduced immediately after rendered this unnecessary, and was the last material change which took place in the management of the institution. The display of courage and patriotism which was exhibited by the whole body of students in the 'three days' must be well known to all our readers. The words of Charles X., in a speech from the throne, 'J'aime à vous dire combien je suis satisfait de l'Ecole Polytechnique,' are probably by this time retracted by the speaker, and certainly adopted by the whole French nation. The next paragraph of this royal speech shews that the wish of our heart may sometimes be fulfilled to our loss, viz. : 'J'espère qu'elle continuera de produire des sujets utiles à l'état et propres à toutes les parties de l'administration.'

We proceed to describe the regulations and studies of the School as they stood in July last. The whole is directed, under the authority of the minister of war, by a governor and sub-governor. The discipline is military. The students are admitted according to their places in examinations, held in the different departments, usually in August. The candidates are required to know, 1. arithmetic, with logarithms, proportion, &c.; 2. geometry, plane and solid, as far as the properties of spherical triangles; 3. algebra, as far as the theory of equations inclusive; 4. plane trigonometry; 5. statics, the propositions being synthetically demonstrated, and applied to the more simple machines; 6. the algebraical discussion of lines of the first and second degrees; 7. the application of logarithmic tables to the solution of triangles; 8. Latin enough to translate a simple author; French composition; 9. drawing, as far as copying an easy design. They must also be able to construct the more simple propositions of descriptive geometry. These are all obligatory, but regard is also paid to a candidate's knowledge of natural philosophy and chemistry. All must give notice before examination, as to whether they intend to enter the public service or not, since a certain proportion of students are admitted for the sake of supplying competent teachers in the different branches. Those who choose the latter course are

allowed to alter their determination at any time. Those who prefer the former, state on entering which service they prefer, and in what order they would choose between the rest. No candidate is admitted who has ill health, or who has not either had the small-pox or been vaccinated. The yearly payment is 1000 francs, or £40 sterling, and each pupil is required to bring with him a uniform, linen, &c., to the amount of about £30. The ordinary time of remaining in the school is two years, some however are allowed to remain three years, but never more. There are 24 'bourses royales,' a species of endowment to those whose means are insufficient, professed to be granted only to those whose parents have done service to the state.

It may be useful to those engaged in instruction to know the proportions in which the time given to oral lectures is divided, particularly as all is arranged with reference to practical utility only, and the whole system has been found to answer extremely well. We subjoin, therefore, the number of hours during which the Professors are actually engaged in communicating instruction :—

FIRST YEAR.	Hours.	SECOND YEAR.	Hours.
Mathematical Analysis . . . . .	52	Mathematical Analysis . . . . .	65
Geometry . . . . .	15	Geometry . . . . .	15
Statics . . . . .	34	Mechanics . . . . .	75
Dynamics . . . . .	18	Geodesy . . . . .	28
Descriptive Geometry and applications . . . . .	108	Machines . . . . .	22
Analysis applied to Geometry . . . . .	24	Political Arithmetic . . . . .	6
Physics . . . . .	51	Physics . . . . .	42
Chemistry . . . . .	54	Chemistry . . . . .	54
History, Belles Lettres, &c. . . . .	34	Architecture . . . . .	51
		History, Belles Lettres, &c. . . . .	34

It may appear that, considering the vast extent of the sciences taught, the time actually employed in communicating instruction in each is too small. It must be recollectcd, however, that since the best candidates for admission only are chosen, the professor has not so much occasion for entering into minute detail as if he were addressing an average class. Assisted as he is by excellent books, and by officers whose business it is to explain to the student whatever he does not at first comprehend, his duty is to enter into general principles, and to lead the student to what he must learn for himself, rather than to teach him. Each lecture is immediately followed or preceded (according to the difficulty of the subject) by a portion of time during which the learner is re-

quired to employ himself in preparation, or application. During this time he is assisted, if he requires it. It is to this union of the advantages of a school and a university that the Ecole Polytechnique probably owes a great part of its success in teaching.

Under the term analysis is included all that part of mathematics in which that method of investigation is employed. The student comes to the school prepared to commence the differential calculus. In the first year are taught the elements of the differential and integral calculus, which, in the second year, are applied to differential equations and the theory of surfaces.

In mechanics, the first year is devoted to the first principles of statics and dynamics, and applications, among other things, to the elliptic motion of the planets, the theory of the simple pendulum, the centre of gravity, the attraction of spheres, &c. The second year is devoted to the general principles of equilibrium and motion, of rigid and flexible bodies, the compound pendulum, &c., hydrostatics and hydrodynamics.

Descriptive geometry, known only in England by some of its most simple applications, on which, as a system, we have not a work in our language, is considered in France as the staple, if we may so express it, of an engineer's education. It has for its professional object to facilitate the construction of all solids, by enabling the workman to lay down on paper the actual lengths and relative positions of the parts without having recourse to models or solid figures of any sort. In addition, as an exercise of the mind, it yields to no part of mathematics, as may be seen from the excellent treatises of Monge and Hachette. It is applied to perspective, the projection of shadows, fortification, drawing of machinery, and all the work of the stone-mason and carpenter. It forms a large part of the studies of the first year at the Ecole Polytechnique.

In machinery, the students are instructed in the nature and comparative advantages of the elementary parts of machines, the different moving powers, and the union of the two branches in most of the machines in common use.

In geodesy is taught as much of astronomy as is necessary for understanding the solar system, the determination of longitude and latitude, &c.; also, the general principles of physical geography, and the use of the magnet and barometer. The trigonometrical methods of measuring the earth are then explained, with the use and construction of the instruments, the projection of maps, &c.

In political arithmetic, the doctrine of chances is applied to questions connected with population, lotteries, insurances, &c.

The elements of an extended course of natural philosophy and chemistry are given with all the detail requisite for applying the principles to practice. In both subjects, particularly the latter, the student is accustomed to continual manipulation, and is rendered familiar with the principles of all the arts which depend on these sciences for their utility.

In architecture, instruction is first given on the different materials in use, then on the several parts of buildings, and afterwards on the application of the two to the construction of a complete edifice.

In history, &c. the literature and history of France up to the death of Louis XIV.

A great part of the student's time is given to topographical design and the drawing of figures and landscapes. In the first of these a few lectures are given on the general principles.

In addition, the students are allowed and encouraged to visit the different museums, observatories, and workshops, where instructive models are preserved, and useful operations carried on. The school itself possesses an excellent cabinet, not only of models of machinery, but of those surfaces which it is difficult to represent on paper. These are made in an ingenious manner by the superintendent of the apparatus, who has likewise sent them to all the civilized countries of Europe, with the exception of our own, and to the United States of America.

We have thus given an abstract of the history and methods of the most celebrated school of instruction for engineers which has ever existed. Such an institution is the thing most wanted in this country. It matters nothing to say, that we have carried many of the arts there taught to a higher degree of perfection than the French. If the genius of our people leads them to greater excellence in this department, why not increase the disproportion still more by the help of system and education? We may and shall be surpassed in the arts in which we most pride ourselves, unless we attend to the formation of those by whose exertions our superiority is to be maintained. Neither is the argument fairly stated, when our manhood is compared with the youth of our neighbours. Before the first revolution, no country was so destitute of practical science as France, and in thirty years no country ever made the same progress. Because we are still much in advance, does it follow that we must therefore remain so? Are we to take no means to put ourselves in mo-

tion, until the decline of our commerce convinces us that our rivals are come up with us? It will then be too late to rectify the error, since the production of a large body of well-educated men is a work of some time, and more still is necessary before their influence can be felt. It is to be expected that the extension of the higher parts of education, which is undoubtedly taking place among us, will reach those whose business it is to apply the sciences to practice. But this is not enough to give assurance, that we shall ever find among our practical men a Monge, a Malus, or a Fresnel, unless a system be adopted calculated to encourage the application of theory to professional pursuits, and to put the researches of the few to the purposes of the many, and to stimulate those whose business lies in one branch, to bring to it the assistance of the knowledge derived from the rest.

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### GERMAN HIGH SCHOOLS.

#### *Gymnasium at Lemgo.*

In most of the German high schools the examinations take place annually, and in some, twice a year. The head masters publicly announce these examinations in small pamphlets, commonly called *Programmes*, which contain also such statements concerning the school affairs as are considered to be interesting to parents and guardians, or to the public at large. We propose to notice these publications occasionally, and to make them the means of giving our readers a more accurate idea of the manner in which the business of education is conducted in the various parts of Germany. To examine the philological dissertations usually prefixed to the school-accounts, excellent as they sometimes are, would lead us from our present purpose.

The subject of the present article is the Gymnasium at Lemgo, in the principality of Lippe,\* which acquired a very high reputation in Germany, under one of its late rectors, Reinert, who died in 1820.

The gymnasium at Lemgo was established in the year 1583, from which time to the present day the principal features of its constitution have remained unaltered. The institution is supported by the town funds, and is under the direction of the town magistrates. But recently, when the means of supporting it proved inadequate to the wants of the

\* The principality of Lippe has about 90,000 inhabitants. Lemgo and Detmold are the two principal towns. Besides the gymnasium at Lemgo, there is a high school at Detmold, in which also young men are prepared for the Universities.

school, the government of the principality began to contribute to its support by an annual donation, for which it reserved to itself the supreme control over its management.

Six teachers are charged with the business of instruction, the four principal being designated by the titles of Rector, Prorector, Corrector, and Subcorrector.

The school has five classes. The average age at which pupils enter the lowest class is from eight to nine years. A pupil's advancement to a higher class depends upon his proficiency. The degree of proficiency requisite for entering a University is generally attained about the eighteenth or nineteenth year.

The following particulars of the plan of instruction are taken from the published accounts :—

I. *Religion*.—In the three lower classes biblical history is taught, and the Christian doctrines according to Zerrenner's catechism. In the two upper classes, parts of the Greek Testament are read; a brief account of the history of the Christian religion is given; and the doctrines of christianity are more systematically developed.

II. *Latin Language*.—(Grammars: *Broeder & Zumpt*.) In *Quinta*, (the lowest class), the rudiments of the language are learnt as far as the conjugation of the regular verbs. In *Quarta* the pupils are made familiar with the whole etymological part of grammar; and easy sentences are translated from Latin into German, and from German into Latin. In *Tertia*, Latin authors, such as Nepos, Justinus, Cæsar or Phædrus, are read, and the rules of syntax are taught by means of written exercises, adapted to the successive paragraphs of *Zumpt's Grammar*. In *Secunda*, Livy, Sallust, easy orations of Cicero, the *Æneid*, or select parts from Ovid's *Metamorphoses*, are read; and translations are made from German into Latin. In *Prima*, the rhetorical or philosophical writings of Cicero, or some of his orations, are read, together with Tacitus, Horace, Terence, or Virgil. Once in every fortnight each pupil has to write a Latin essay on a subject given by the Professor.

III. *Greek Language*.—(Grammar: *Buttmann*.) It is taught only in the three upper classes of the School. In *Tertia*, the etymological part of the grammar is learnt, and written exercises on it are required; at the same time the first part of the well-known elementary work, by Jacobs, is read. In *Secunda*, the study of grammar is continued and completed, and Homer, Xenophon, Arrian, or the lives of Plutarch, are read. In *Prima*, Homer, Sophocles, Herodotus, Thucydides, Plato or Demosthenes, are read, with constant reference to the grammar.

**IV. Hebrew Language.**—(Grammar: Gesenius.)—It is taught in the two upper classes, for the sake of those pupils who intend to study theology after they have left the school.

**V. German Language.**—In *Quinta* and *Quarta*, short themes are written, and the fundamental rules of German grammar are learnt. In *Tertia*, the grammatical instruction is completed, and the writing of themes is continued. In *Secunda* and *Prima* also German essays are written, and the history of German literature, or logic and rhetoric, are alternately taught. Besides this, there are in each class exercises in the oral delivery of extracts from classical German authors that the pupils have learnt by heart.

**VI. Modern Languages** are not taught in the school; but some of the Professors give private instruction in French and English.

**VII. Mathematics.**—(Class-book: Kries, for the higher classes.) The mathematical instruction in *Quinta* and *Quarta* is confined to the elements of arithmetic. In *Tertia*, a beginning is made with plain geometry; in *Secunda* and *Prima*, are taught stereometry, trigonometry, logarithms, conic sections, &c.

**VIII. History.** Historical instruction commences in *Quarta*. In this Class, as also in *Tertia*, it is confined to ancient history. In *Secunda* and *Prima*, universal history is taught, in three lessons per week, the entire course being continued during three years.

**IX. Antiquities.** In the two higher classes, instruction, or lectures, are also given on Greek and Roman antiquities, comprising the history of classical literature, ancient geography, and an account of the philosophical systems of the Greeks.

**X. Geography**, as an object of instruction by itself, is confined to *Quarta* and *Tertia*. The attention of the pupil is chiefly directed towards physical geography. The sites of remarkable towns, and other particulars belonging to political geography, are pointed out with constant reference to the natural features of each country, its mountains, rivers, &c.

**XI. Natural History** is taught in *Quarta* and *Tertia* only, where the instruction is given according to a manual by Schubert.

**XII. SINGING** is taught two hours weekly, one hour being appropriated for junior, and another for senior pupils.

**XIII. Calligraphy** is taught in the three lower classes. Drawing is not taught in the school.

The number of weekly lessons for each class in the various departments just specified, may be seen from the following table.

## Classes, and Number of Weekly Lessons.

<i>Objects of Instruction.</i>	1st Cl.	2d Cl.	3d Cl.	4th Cl.	5th Cl.	Total.	
Religion .....	2	2	2	2	2	10	
Latin Language.....	9	8	8	7	3	35	
Greek Language.....	7	7	4	0	0	18	
Hebrew Language.....	2	2	0	0	0	4	
German Language, &c.....	3	4	4	7	11	29	
Mathematics.....	3	3	3	2	3	14	
History.....	3	3	2	2	0	10	
Geography.....	0	1	2	2	0	5	
Antiquities, &c.....	1	0	0	0	0	1	
Natural History.....	0	0	2	2	0	4	
Singing .....	0	0	1	1	0	2	
Calligraphy .....	0	0	1	2	5	8	
	<hr/> Total	30	30	29	27	24	<hr/> 140

The following is a list of the number of pupils in each class at the close of the winter session of 1829 and 1830.

	1829.	1830.	
Prima .....	9	11	
Secunda .....	7	6	
Tertia .....	11	15	
Quarta .....	41	34	
Quinta.....	32	42	
	<hr/> Total	100	<hr/> 108

The fees payable for attendance in the several Classes are, per annum,

for Prima .....	12 dollars (£1 16.)
— Secunda.....	10 dollars (£1 10.)
— Tertia.....	6 dollars (£0 18.)
— Quarta .....	5 dollars (£0 15.)
— Quinta.....	4 dollars (£0 12.)

Two of the professors take pupils from abroad into their families. Terms: twenty louis d'or per annum (about 16*l.* or 17*l.*)

There are two sessions in the year, one commencing at Easter and the other at Michaelmas. A public examination is held at Easter, and a private one at Michaelmas. There are four vacations of two weeks each at Christmas, Easter, Midsummer and Michaelmas.

Before a pupil leaves the school for a University, he must undergo a particular examination to obtain his testimonial of *maturity*. This is a general regulation in all the German schools. No pupil is admitted into a University without producing such a testimonial from the school where he has been educated.

## EDINBURGH SESSIONAL SCHOOL\*.

SHOULD some traveller tell us that he has just come from a country where children are educated in such a way, that the time of their lessons is to them a time of real happiness; should he assert that he saw them eagerly running to school; that he heard them answer in a few minutes, nay in a few seconds, questions about which children, of equally good understanding, are often seen elsewhere groaning for hours and weeks, would not there be a suspicion of exaggeration? But suppose the traveller's report should be trusted, would not every one eagerly inquire where, and by what new art, have such effects been produced? Well then, it is neither in a distant land, nor in the fertile imagination of some philanthropist, that this wonder exists, but it is in this island. This new art is nothing, but what every sensible man already knows; nothing, indeed, but the well-digested combination and explanation of some few sound principles, which all ages have proclaimed to be true, but which, in all ages, have been pitifully abused, and more pitifully misunderstood or misapplied. Thus, because seldom failing experience had taught mankind, that idleness is the parent of ignorance and vice—teachers of youth have idly concluded, that the longer children could be employed, no matter about what, or in what manner, they would get the *habit* of industry; and, thus, the pleasant time of childhood, instead of being employed in alternate bodily and intellectual exertions, to fit youth for their maturer and more important duties, has been changed into hours of tediousness and sorrow. And, because reason had taught mankind, that no means ought to be spared to destroy the seeds of immoral habits, teachers have concluded, that the most violent, and apparently the most expeditious means, would answer best; and, accordingly, the work of reformation in schools has generally been only an oppressive tyranny; and it has not been considered, that the same blow, single or repeated, might injure truly sound and promising principles, while its effect on bad principles is at least doubtful. And even now there prevails in our best public schools the Draconic practice of the rod, a mere expedient for saving time and trouble to the masters; a practice whereby all sorts of faults are wilfully confounded and assimilated, since teachers of learning

\* This article contains the reflections of an intelligent foreigner on our general school system, and on the working of the Edinburgh Sessional School.

and science inflict indiscriminately the same infamous punishment upon all kinds of delinquents. Who can deny that amiable, good-natured boys are daily degraded to the same level with decidedly dishonest, unpromising schoolfellows, when their fault is nothing more than some trifling irregularity, or the consequence of some careless habit, for which, perhaps, the master is censurable? but who can wonder at it? For is it a grosser inconsistency to flog a boy on account of some blunder in his parsing or scanning, than to plague him intentionally with an extra lesson, on account of some pistol-firing, or pane-breaking, or some other faults, which have not the least connection with his studies? We admit indeed that boys should acquire the habit of doing the regular school business; but it is beyond our conception, that boys should be punished with lessons because they do not like them, or even because they do not improve in them. Poor boys! how can you be fond of lessons which you daily see imposed as a punishment? How can you improve in studies? how can you understand the object of studies, which cost you so many tears?

Finally, because experience and reason have taught mankind that knowledge is the most desirable of all earthly goods, it has been thought that experience and reason gave their sanction to *any* method of imparting knowledge. How few indeed have ever considered that the most scientific modes are often the worst of all for beginners; and how very few truly learned men have ever humbled themselves so low as to undertake to write elementary books, which would be well adapted for young learners! We do not mean to expatiate on the absurd system of teaching boys clever things, merely because they are such, though mostly beyond the reach of their intellectual powers; we do not mean to appeal to common sense, in order to prove what every man is aware of, namely, that there must be, that there is an ascending scale to follow in the course of studies, for all this is reckoned among truisms; but if they are truisms, why is it still in some schools a sort of prodigy when a boy knows more about his own country and the objects of daily investigation, than about Ilion or the wrath of Achilles? Certain it is, that, in great schools, upon a liberal footing, the knowledge of antiquity should be considered as part of the basis of all future improvement; but ought it to be considered as the only part, even as the corner stone of it? Poor boys! the master will readily forgive you, if you do not know what bread and clothing and houses are made of; but none will forgive you, if you are unable to repeat a long set of examples, which

you hardly understand, in explanation of rules and exceptions, which you understand still less. You are pronounced nothing but ignorant, idle fellows, because you find it too hard to learn a dead language, through the medium of another dead language, of which you stammer a few monosyllables. But this is, they say, a capital way of exercising your memory, if not your judgment; or your patience, if not your memory.

Such is a slight sketch of what is styled by many—the old system, the respectable old system, by which the rising generation must be trained. But where is the true lover of his country who knows how much the condition of society depends upon the care taken of youth both in school and at home, who will not be tempted to cry out to his countrymen, Look around you—other nations are making great and gigantic steps to overtake you? Already they are determined to enjoy the benefits which you enjoy; they are proud to possess your sympathy and approbation; their eyes are turned to you as to their best model, but beware, lest ere long they leave you behind in the race, after having tried and adapted to themselves, what is really good in your institutions; and then you will have no other resource but that of becoming in your turn the imitators of those to whom you were so long a noble model.

The thanks of the community are justly due to two gentlemen, whose indefatigable exertions have been attended with the most admirable results in Edinburgh. The names of Mr. Pillans and Wood are deserving of the respect of all who take an interest in the education of youth. For widely-extended as education is in Scotland, they felt that sound principles of teaching were little understood, and their object, accordingly, has been to show how education could be easily improved. Their plan is not founded upon any of those seducing systems, which answer marvellously well as long as they are not put to the test. It is, as we said before, nothing more, but a well-digested combination of some few good principles (recommended in all ages from Quintilian down to Locke, Pestalozzi, Lancaster, Jacotot, &c.), and none exclusively; for though the worthy reformers just mentioned deserve universal gratitude, it cannot be said that they attained perfection in the art of teaching, but only paved the way to it.

We do not mean to say, that Mr. Wood's and Pillans' plan has attained that perfection, but having been eye-witness of its successful application, we feel it a duty to declare that it seems to answer better than any other. A principle that

ought never to be lost sight of, is this—to render the time of study as long, but at the same time as agreeable as possible ; in other words, such, that the children's physical, as well as intellectual powers be the gainers by it. No doubt, children will never improve in any department without some efforts and fatigue : it would be absurd to expect it, still more so to act on this principle. But if children are made to find a pleasure and a sort of glory in surmounting obstacles for several hours together, the contriver of this must certainly be proclaimed one of the greatest benefactors of his country.

Our admiration will be sincerely shared, by those who have witnessed some of the exercises in the sessional school of Edinburgh ; where the children are to be seen eagerly vying with each other in their readiness to give answers to questions proposed on the various subjects of their daily lessons, frequently not a little astonishing ; whilst it is hardly possible to notice the least sign of weariness or impatience.

Whoever has seen the animation of those little monitors during their examination, whoever has tried to puzzle them with some questions, will acknowledge that similar things are not often seen. It is true that a great part of this animation is excited by the expectation, or the actual presence of strangers, who are freely and purposely admitted once a week ; but, even without this excellent, though not always practicable part of the system, we do not think that the school exercises would be much less lively than we saw them. It is true also that no such voluntary instructors as Mr. Wood will be found at all times, and in all places, to superintend the whole ; but this is no unconquerable difficulty, if proper choice be made of masters well prepared for the application of the system. Its principles will be found in Mr. Wood's account of the sessional school of Edinburgh, and further illustrations of it in Mr. Pillans' letters on elementary education. Our present object is not to write a review of those two little volumes—but only to excite a more general attention about the subject on this side of the Tweed, at a time when so many indispensable alterations are expected in the management of all sorts of schools. We shall only add a few words more to give a slight idea of the simplicity of the whole.

The first and fundamental principle is : *that children when taught anything, should be taught at the same time to understand what they are about ; in other words, to arm them with two powers, the mechanical and the intellectual one :* for this is the only means of laying a good foundation for accuracy of observation, as well as for precision of ideas. How-

ever, it is properly recommended, not to push the instruction too far into minute details, for fear pupils should require the habit of substituting words for ideas, and lose the interest and novelty which historical facts, as well as the works of nature and art, ought to excite in their young minds. Therefore, never should there be too long and too scrutinizing an investigation into the mysteries of great discoveries and high sciences, as chemistry, astronomy, &c.; but rather agreeable descriptions and examinations of objects within the reach of their senses and understanding, whenever they occur in their reading, and other lessons, whatever they may be.

*The second principle is that corporal punishment should very seldom, or rather never be resorted to*—and without saying any thing more upon it, we ask whether it be not painful to think that such a truth, now generally acknowledged abroad, should be still a matter of hesitation with some people in England?

The third and last fundamental principle is: *that every pupil in school shall, at all times, have something useful to do, and a motive for doing it.* Mr. Wood ably proves that the only way in which this can be done, is by taking advantage of what is always practicable in the monitorial system. This, he says, and we believe it, is one of the most powerful principles of action, cheerfulness, improvement and love of study—so that the first and most important duty of the chief master consists in finding out clever boys for monitors, in order to train them every day for the lessons of the following day, which they will teach in their turn. What we have seen shows how well it can be done, with proper discernment of the several tempers and capacity. It is not only in order that the work may go on simultaneously and uninterruptedly, that this part of the system is reckoned of absolute necessity, but also because those young teachers are most likely better teachers than the master himself of the lessons which it is their duty to repeat to others. They feel indeed much better than any full grown persons, what are the difficulties, and how one can surmount the obstacles, which they themselves have surmounted the day before.

We see no well-grounded objections to the monitorial system being *tried* (but not too rashly adopted), at least in the lower forms of our great classical schools, provided a proper change of elementary books be previously made. We do not doubt, that if clever masters set about a thorough investigation, and consideration of the subject, great changes would be made in the old system. Mr. Wood and Pillans have shown, that hitherto the art of teaching is but in its infancy; that it has

its principles as well as any other art; and that those principles, hardly thought of in the appointment of masters and tutors, ought to be ranged among their most requisite qualifications.

We cannot conclude without mentioning a circumstance connected with this school, highly calculated to give a proper idea of the individual character of its zealous promoter. That circumstance is, that Mr. Wood's pursuits in life are not connected with education ; he is an advocate, and Sheriff of Peeblesshire, so that it is merely out of the noblest and purest motives that he has devoted himself to an active superintendence of this school, because he was conscious that it would be widely beneficial to the poorer classes.

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#### EDUCATION IN THE IONIAN ISLANDS.

THOUGH we are not at present able to give any complete account of the education of the Ionian Islands, we think that the following short abstract of the regulations prescribed by the government for the secondary schools may appropriately be inserted in this Journal, since official documents, like that on which our statement is founded, can never be very extensively circulated. The paper before us is printed in Italian and modern Greek, in parallel columns, and issued by the authority of the Senate (*Bouλή*). It contains under five heads all the regulations for the Secondary Schools of the United Islands\*. The first head relates to instruction, of which the following are the chief particulars :—

In the first year are taught,

1. The ancient Greek language, 4 lessons a week.
2. The Italian language . . . 3 ditto.
3. English . . . . . 2 ditto.
4. Arithmetic . . . . . 4 ditto.
5. Writing . . . . . 1 ditto.

On each day there must be a repetition of the lesson of the preceding day ; and on the sixth day of the week a repetition of the lessons of the whole week.

The Greek master uses Buttmann's Grammar, translated into modern Greek, and the first volume of Fred. Jacobs's collection of Extracts from Greek Authors. In Italian, Soave's or Blandi's Grammar is to be used till the government orders some other, and

\* Διάταγμα τῆς διοργάνωσεως σχολίων τοῦ Ιωνίου κράτους τῆς Ἰωνίων νησῶν.

the *Antologia di Milano* is to be adopted as a reading book. The English teacher must use the Epitome of Murray's Grammar, and the Greek and English Grammar of Lowndes, or the Italian and English of Vergani; and he must use as text books, Interlinear Translations from Select Authors, 'Goldsmith's History of Greece,' 'History of Rome,' 'Enfield's Speaker.'

The Mathematical master must use Bourdon's Arithmetic.

Second Year.

Books.

1. Greek, 4 lessons a week. Buttmann, and Jacobs, vol. ii.
2. Latin, 3 ditto.
3. Italian, 3 ditto. . . . Soave, *Antologia*.
4. English, 4 ditto. . . . As before.
5. Algebra, 5 ditto. . . . Bourdon.
6. Writing, 1 ditto.

The Latin master must use Soave's Italian and Latin Grammar for the present, and, as a text book for reading the language, the 'Selecta' of Padua.

In algebra the student advances as far as the theory of logarithms inclusive.

Third Year.

Books.

1. Greek . . . . 4 lessons a week. Buttmann, Jacobs, v. iii.
2. Latin . . . . 3 ditto. . . . Selecta Patavina, pt. 2.
3. Italian . . . . 3 ditto.
4. English . . . . 4 ditto.
5. Geometry, plane & solid, 4 ditto.
6. Geography . . . . 2 ditto.

The professor of mathematics must use the plane and solid geometry of Legendre. In geography the text book is that of Adam Christian Gaspar, translated from the German into modern Greek.

Fourth Year.

Books.

1. Greek . . . . 5 lessons a week. Buttmann, Jacobs, vol. iv
2. Latin . . . . 3 ditto.
3. English . . . . 5 ditto.
4. Algebra, completed, 2 ditto. . . . Bourdon.
5. Logic . . . . 3 ditto. . . . Soave's Logic.
6. Geography . . . . 1 ditto. . . . As before.

The Latin teacher will explain the second volume of the *Antologia* of Padua, and will teach the elements of metre and versification; and the English master will explain English authors of standard character, and give exercises in composition.

The English master may use the Hamiltonian system, if he thinks it calculated to facilitate the progress of his pupils; and the masters are permitted, by Art. 28, to make use themselves of such other books as will enable them to render their instruction more efficient.

The second chapter contains the regulations about the director, professors, and students, and their respective duties.

The director (*diεvδυτής*) in each school is the head of all the professors, and it is his duty to see that professors and students follow the regulations prescribed by the government; and also that the professors treat their pupils ‘con maniere civili, e con tolleranza e bontà.’ Nothing is said about the behaviour of pupils to professors. The scholastic year begins on the first of October, and terminates at the end of July. The business of the school commences each year with a prayer and religious exercises, for the performance of which a respectable priest is attached to each school, whose duty it is also to officiate on all those days set apart for devotion by the School Calendar. The priest for each school is appointed by the Archbishop of the Island. To obtain admission into the Secondary Schools, a student must have passed with credit through the primary schools. His name, age, and the island to which he belongs, are registered in a book, and at the same time his certificate of baptism must be presented.

From among the numerous regulations of Chapter II., many of which, in our opinion, can produce no good, we select the following as specimens of the constant check kept on the professors, and their constant liability to be interfered with; a kind of discipline, we believe, which has never been found effectual wherever it has been tried, and in this opinion we feel sure of the concurrence of all persons who are practically acquainted with places of instruction.

Article 26.—When the director is not engaged in teaching, he must be present at the instruction of some of the professors, to observe if the course of study and mode of teaching prescribed by the government are strictly followed; and in case of any deviation from the rules, he must admonish him to return to the right course, and if the professor perseveres in his conduct, he must report him to the general commission.

Article 27.—When the director is present at any lesson, he may put to the students any questions on any previous lesson.

Each lesson must last one hour exactly. The director has the entire superintendence over the pupils, and it is his duty to warn them of the consequences of any bad conduct; to inform their parents or guardians if necessary, and finally, if they repeat the offence, to banish them from the school till there is good evidence of their reformation.

The following regulation (Art. 36.) is a good one. ‘Every Professor must bring with him to each lesson a book, pro-

perly prepared and countersigned by the Director, in which he must enter the names of all the students who fail to attend. If a student miss thirty lessons in a scholastic year, without having the plea of illness or some other valid excuse, he loses his privilege of being examined at the end of the year, and of being advanced into the next year in the academic course.'

The third chapter treats of the examinations, which are conducted by the Director and Professors. The examinations commence one month before the close of the scholastic year, and the times of examination are so chosen as not to interfere with the business of instruction, which still goes on. These examinations are public, and one class is examined after another in the following manner. On a table covered with green cloth (specially provided for, Art. 2, Chap. III.) there stands a closed urn, into which the Professors put as many written questions as are necessary for the complete examination of a student. The number of these questions must be forty, out of which, after the urn has been shaken, the student must take six; and on these he is examined. Then the doors are closed, and the business ends by the bedell collecting in a ballot box the votes of the professors; the director (whose name and functions are perpetually brought before our notice) has a double vote, when the votes are equally divided. The results are then made known by the director; and they are divided into three classes, *best*, *good*, and *moderate* (*ἀριστός*, *καλὸς*, *μέτριος*). Two thirds of the votes are necessary to entitle a candidate to *best* or *good*; the *best* of course must be selected from those who have attained two thirds of the votes, and are consequently among the good. It may happen that a student may obtain *best* in one subject, *good* in another, and so on, according to certain combinations of those values (a matter of detail unnecessary to go into), and in this case he receives a proper certificate, signed by the director and professors, by which he is permitted to pass on to the studies of the next year; and his name is included in the report made to the commission. A student who does not obtain the necessary certificates cannot pass on to the studies of the next year, but must continue in the same year.

The fourth chapter orders, that a room shall be appropriated in every school to receive the books which the government may send to the library; and to hold the maps, mathematical instruments, and whatever is used in the school. The director appoints one of the students to take

care of the library, which is principally intended for those students who cannot afford to buy books.

The director keeps the school seal, which, when affixed to a certificate, gives it a legal form: the seal is an owl (*κακούβαρυα*).

As a specimen of the language, and of the minuteness of the regulations, we give the following extract, which is the whole of Chapter V. (the last).

#### TITOLO V.

##### Dei Serventi.

In ogni scuola secondaria vi sarà uno o più bidelli, destinati al suo servizio. Esso o essi saranno incaricati della pulizia delle sale o stanze, e di tutto ciò ch' è annesso a questo ramo. Saranno sotto la sorveglianza del Direttore e de' Professori. Il primo potrà ammonirli quando mancassero a' loro doveri, e recidivando avrà la facoltà di condannarli. I Professori potranno provocare dal Direttore l' ammonizione o correzione de' bidelli seconda la natura del caso.

#### Τίτλος Ε'.

##### Περὶ Ταπεινῶν.

Εἰς κάθε Διοικήσιν σχολιῖσσαν, θὰ εἶναι ἡ περισσότερης Ταπεινὴ, διαφέρειν τις τῇ διάλεκτῳ του. Λίγος οὐτοί θὰ εἶναι περιφερειώτερη διὰ τὴν πάντας τὸν πρόδρομον καὶ τὸν κατανικόν, καὶ πάθει μᾶλλον ἑτοῖς ἀποβλίσι τὸν πλάνον τούτον. Λίγοι θὰ εἶναι οὐδὲ τὴν ιερωτασίαν καὶ τὰς προσταγὰς τοῦ Διευθυντοῦ, καὶ τοὺς Διδασκάλους. Οἱ πρώτοι θὰ ἐμπορεῖται τὸν Ιλιγχη, ὅταν λίγουν ἀπὸ τὸ χρόνον ταῦτα, καὶ οὗτοι λίγουν καὶ δυνήσανται φάσαι, θὰ Ιχιοὺς ή Κεύσιας νὰ τοὺς οὐγάζῃ. Οἱ διδασκάλοι θὰ ἐμπορεῦται τὰ ζητῶντα τὰ τὰ Διευθυντῖν, τὸν Ιλιγχην οὐ τὴν διάρρησιν τὸν Ταπεινὸν, κατὰ τὸ μῆδε τοῦ σφάραρτος ἑτοῖς ιεράχθη.

As we have at present no information on the working of this system, we can only judge of it by a knowledge of what takes place elsewhere. If there is any one defect that is more striking than the rest, it is the restrictions of various kinds that are placed on the teachers, who, if they be intelligent and well-educated persons, must frequently find the government regulations rather hard to abide by. If the teachers in the Ionian Islands are not yet such a class of men that they can be trusted with more discretionary power, it may be expedient for the government to exercise a strict superintendence, though we are convinced that surveillance and perpetual interference, or the power of perpetual interference, vested in any person whatever, can neither make men good teachers, nor keep them so.

Some superior power, it is true, there always must be, for the purpose of correcting abuses that may arise in places of education, and for making periodical inquiries into their condition; but this power is best exercised at stated intervals, the management of education being left to competent teachers,

who will find an adequate motive for exertion in knowing that their interest and reputation depend on their diligence, and that neglect of duty must necessarily bring with it loss of income and of character.

The great attention that is paid to the ancient language of Greece in the Ionian schools is a highly important part of the system, and we hope that its effect will be soon perceived in the improvement and purification of the modern language. The cultivation of Italian and English are also equally necessary ; the study of the latter, however, we must consider, is principally due to the present political circumstances of the Islands ; and though we cannot but feel gratified at the diffusal of our own tongue, we could wish to see the French also made a branch of education, as it yields in real importance to no department of learning that is included in the present scheme.

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## R E V I E W S.

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### ZUMPT'S LATIN GRAMMAR.

1. *Lateinische Grammatik* von C. G. Zumpt, Sechste Ausgabe. Berlin, 1828, pp. 659.
2. *A Grammar of the Latin Language* by C. G. Zumpt, Doctor in Philosophy, Professor in the Joachimsthal Gymnasium, Berlin, translated from the German, with Additions by the Rev. John Kenrick, M.A. Second Edition, corrected and enlarged. London, 1827, pp. 456.

THE great success of Dr. Zumpt's Grammar in Germany, where it has already reached at least a sixth \* edition, and the increasing circulation of Mr. Kenrick's translation in this country, would be sufficient to call for some notice of this work, even if it had no positive merit to recommend it. But as it possesses a very considerable reputation, and contains many improvements on preceding grammars, it will be useful to enter into a minute investigation of its merits and defects. The problem of acquiring a language with the least amount of labour has never yet been thoroughly solved, yet a very simple view of the question will lead to the conclusion, that in philology, as in the other sciences, classification and careful induction form the only safe foundation. Like botany or zoology, the science of language is founded upon natural causes, and if it were studied upon the same principles which have been so successful in the hands of Linnæus and Cuvier, it would be found to present results equally certain and regular. This is no idle comparison, nor fanciful illustration. The philologist will never arrive at great results and general conclusions, unless he proceed in the slow course of the Baconian philosophy. The vocabulary of a language is the field of his inquiries; in traversing this field he will continually find analogies to guide him in classification. Let him avail himself of these, and his industry will soon carry the classes of analogous words to such an extent, that subdivision will be necessary; and here, again, analogy will be the same easy and certain guide. A general classification, embracing the whole vocabulary of the Latin, or any other language, ancient or modern, would be at once the safest foundation for the inquiries of the philologist, and

\* Of one edition alone ten thousand copies were printed.—*Translator's Preface.*  
JAN. 1831.

the most powerful aid to the beginner. The Greek language contains, we are told, above eighty thousand words ; who, then, would undertake the task of acquiring this language, but for that beautiful system of ramification by which these words branch out from some few hundred stems ? The knowledge, however, of the stem is not sufficient for the student, unless he know also the form and power of the several prefixed and appended syllables, by which the meaning of the stem is qualified. Much, then, will depend on the facility of becoming acquainted with these qualifying syllables ; and this facility will again chiefly depend upon their number, which fortunately is extremely small. In the whole extant writings of Xenophon, it may be safely affirmed, that there are not more than one or two hundred different roots, and certainly not so many suffixes, with perhaps twenty or thirty prefixes. He who can read Xenophon will find little trouble, as far as the vocabulary is concerned, in studying the writings of any other prose Greek author of the same period ; if we except *technical* phrases.

The Greek has been taken as an example, only because the systematic connexion of its several parts has long been familiar to the student. The Latin language is generally put before us at too early an age ; and though we master it, indeed, in a certain degree as a task, by dint of memory, we are not taught to observe those beautiful analogies which really exist in it to the same extent as in the Greek. The scholar, on the other hand, is called away by the more valuable and more interesting contents of the Greek tongue, and his attention is devoted almost exclusively to that quarter. To him the Latin language presents little that is valuable in the matter, and, if he has not examined its etymological forms, nothing but what is barbarous in its structure. Now, as it is the fashion to learn Latin, and as this language is generally supposed to be worth learning, it is certainly desirable that the time and labour bestowed upon it should be laid out as productively as possible.

A *complete* grammar should furnish every assistance to the student in the classification of the various suffixes or terminations, giving both their form and their power, while the dictionary should furnish him with the other component part of every word, viz. the stem. The only objection to a grammar that should comprise what we propose, is this,—that its very bulk would render it nearly useless to the beginner. This objection, it is true, is a most important one, though we believe that the whole system of suffixes, if clearly exhibited, would not extend much beyond the limits assigned to the accidente in our larger

grammars. Still the whole would be far too much for a beginner. The remedy, then, is simple,—to distribute it into portions, and to give him first only that which is necessary for his immediate wants. It is desirable, indeed, that this should be made as little as possible. There is no greater error than that of presenting the student at the outset with an accumulation of facts, the greater part of which can have no value except for the advanced scholar, while that which is simple and necessary is buried under a heap of useless matter. Give the pupil at first the little that is essential, before he opens a page of a Latin author; and supply him afterwards as his wants increase, with grammars that are adapted to his necessities and his progress.

But, in order to form a more precise notion of the compendium suited to the wants of a beginner, let it be supposed that some simple narrative, like that of Cæsar's Commentaries, is first placed before him. For reading these, what portion of the common accidence is necessary? Must we give the *complete* declensions of the nouns? No—the vocatives are useless. The pronouns? *Ego, tu, meus, tuus, &c.*, never occur. The verbs? The third persons only are required; while the futures of the indicative, and the imperative, are not wanted at all. In the department dignified by the title of *Propria quæ maribus*, a complete revolution is requisite. Postponing to his hours of leisure the determinations of the gender of *siser, tuber*, and such words, the pupil will do better to confine himself, for the present, to the gender of those employed by Cæsar, or rather to such of them as belong to large classes. Thus the termination *tas, tatis*, occurring in every page of every Latin author, it is an economy of labour to learn the gender of some hundred words like this, from the gender of one. But, single instances, such as *sol, nox, &c.*, are best learned as the pupil meets with them. According to this principle, a few pages will be found sufficient to comprehend a short series of the more important suffixes, each supported by several examples. Such a grammar would be sufficient for the beginner; but to meet objections as to its being too meagre, we might insert the declensions, &c. *complete*, though we do not think it necessary. And even this should not be committed to memory, but should be explained by examples, and applied as the several parts may be wanted; it should be used, in short, like a lexicon, as a book of reference. With this assistance, a pupil will find little difficulty in reading all the Commentaries of Cæsar; but, suppose that it be only the first book that he can master with this stock of

grammatical knowledge, we maintain that, by learning well one book of Cæsar, he has made no small progress in the acquisition of the language.

Nothing has been said about the syntax, because we do not think that much benefit, in this department, is afforded to beginners, from mere rules. Examples, indeed, are useful, but examples will be found in the author himself. Syntactical precepts are seldom understood by themselves, and still more rarely attended to. The deduction of principles from the observation of facts, and the constant application of them, are the best methods of making them familiar; and when once fully comprehended, they will be remembered without difficulty.

These prefatory remarks are not without their use in the subject proposed for examination. It is impossible to form a satisfactory estimate of the value of a grammar, unless we consider it in relation to the object for which it is intended. While a few pages of the simplest nature are sufficient for the purposes of the beginner, the extensive inquiries of the philologist require a complete and systematic analysis of the whole language; one, in which every separate part should be anatomized, all similar formations classified, all varieties noted, and, if possible, explained; one, that should not merely consider the elements of the language with respect to one another, but should point out their connection with the elements of the kindred tongues. Between these two extremes, Dr. Zumpt's work seems to hold a middle rank. Though far too bulky for the beginner, it will afford but small assistance to the labours of the philologist.

If, in the examination of this work, we were to take any other grammar as a standard, we should, perhaps, find little to condemn in it, for it is, on the whole, far superior to any other in use among us; but, our object is rather to compare it with what such a grammar should be, than with any that has yet appeared.

The chief merit of Zumpt's Grammar consists in a more copious, and better arranged syntax; the examination of which is not our present object. It is the etymological department, perhaps the most important of all, which will be here discussed; and, in this department, the superiority of Zumpt over our English Grammarians is less decided.

The Grammar begins with a section on the letters, which in the original occupies the space of ten closely printed pages. To this extent no objection could be made, had it been employed in establishing the power of the different letters, in pointing out the natural connection between them, and hence deducing the proper explanation of the euphonic changes, which are so

embarrassing to a learner, till they are clearly understood. As the ear of a German appears less sensible to the distinction between the sounds *v* and *w* as pronounced by an Englishman, we did not expect any thing precise on the nature of the *u consonans*. It would expose us perhaps to a charge of cockneyism, if we ventured to pronounce *vinum* like the corresponding word in our own tongue ; and it would be idle as well as pedantic to adopt this pronunciation in practice. At the same time the establishment of the principle is essential to a right understanding of Latin etymology. The second great stumbling-block among the letters arises from the consonant *i*, or, according to modern orthography, *j*. The translator seems to have forgotten that this letter with a German has a power altogether different from that which we give it. A German will make no error in the pronunciation of *jubet* ; an Englishman requires to be told that the true sound is *yubet*. Custom has with us decided against the right sound ; and we again repeat that we will give up the point of practice, if the principle be conceded. Many other points equally essential are altogether omitted ; and in their place we have discussions about the orthography of particular words. For instance, we are told that *contio* is preferable to *concio*, because the former occurs on inscriptions. If this had been the proper place for establishing the orthography of an isolated word, little objection could be made ; but it should at least have been added, that the older form of this word is proved by the very same authority to have been *coventio* ; which in fact shows why *contio* is the preferable form. The question between *propitius* and *propicius* we will not attempt to decide, but certainly the *t* in *propter* would not affect that decision, as the author intimates. In page ten it is determined that *artus* is more correct than *arctus*, whilst on the contrary *auctor* is preferable to *autor*. Again *paulum*, *anulus*, &c., we are told should have a single consonant, while *immo*, *nummus*, &c., should have two, and so on. As no reason is given in support of these assertions, it is unnecessary to discuss them. But one question may be asked—Why fatigue the memory with distinctions idle in themselves, and not exemplifying any principle whatever ?

Corresponding to these ten pages of the original, the translation presents only two ; and if we take into account the difference of type, the proportion of matter must be still smaller. Whether this be owing to any judicious curtailment on the part of the translator, or to a difference in the early editions we do not know. A disagreement, arising perhaps from a similar cause, occurs in the following section on the division of syllables, where in the original a

system of division is recommended which would lead to such ludicrous results as *fra-gmentum*, *a-gmen*, *uni-madverto*, *longaeus*, &c. But of this there is no trace in the translation.

The chapter which follows on the quantity of syllables, from its mere position in the Grammar, was not likely to present anything very valuable to the student. The quantity of syllables must, from the nature of language, be in a great measure dependent on etymological formation; how then can we expect a philosophical investigation of this question, when the very elements on which the inquiry should be founded, are yet unknown to the student? Between a long *o* and a short *o*, there is at least as great a difference as between the letters *t* and *d*. It is therefore as important in our accidence to mark the one distinction as the other. And if such a system were adopted throughout this department, we should hardly have any occasion for a distinct chapter on the subject. Moreover the system of classification in this as in other treatises on prosody is too hasty. Thus we have the broad rule laid down, that *us* final is short, and then of course follow a number of exceptions. First, all the monosyllables are excepted; then, certain cases of the fourth declension; then, certain nominatives of the third declension, &c. In fact, so many exceptions are made, that the student has scarcely an idea of what is left behind. All this heaping together of words that have no connection with one another would have been avoided had the quantity been marked throughout the etymological inflections. Let the nominative of the second declension, for example, be written *servūs*. Here is an important grammatical fact, applicable to more than a thousand words. Standing by itself, it is impressed upon the student's memory. It may be compared with the corresponding form *δυλος*, of the Greek. On the other hand, in the prosody it is concealed behind the unmeaning phrase, ' *us* final is short; ' while the quantity of *palūs*, *paludis*, to which there is scarcely a fellow in the language, stands in all the dignity of a special exception. Or again, take one of the exceptions, ' the genitive of the fourth declension is long; ' how much better would it be to mark the inflections—Nom. *portūs*; Gen. *portūs*, where a mere child could scarcely fail to perceive that the long syllable was the result of contraction from *portuis*.

The objection we have just made is one against the whole principle of Zumpt's arrangement; it will be worth while, perhaps, to make a remark or two on the details. After a rule has been given for the quantity of the reduplicated syllable in perfects so formed, is it necessary to insert *dedi*, *steti*, under a separate article because they happen to be dissyllabic words?

Indeed, two others of the dissyllabic list, if not more, may be omitted. Thus, *tuli* and *scidi* were also, in their older form, reduplicated perfects, viz. *tetuli* and *sciscidi* (or perhaps *scicidi*), for both of which we have a long list of authorities, including, among others, Ennius. An attention to the form of *tetuli* would also have explained the apparent anomaly in *rettuli*, which is exactly analogous to the other perfects, *rep-puli*, *repperi*, *rettudi*, given in page 17, all deduced from perfects of reduplication. Dr. Zumpt gives, with the same list, *reccido*, *redduco*. The perfect, *reccidi*, is strictly parallel with the above, and accordingly we find it in the *De Repubblica*, where it seems to have occasioned some difficulty to the Italian commentator. But the two presents, if there be authority for these forms, must be classed with *red-do*, and explained on grounds wholly different. Throughout this section there is much confusion from the same faulty classification. It may, perhaps, be difficult to assign the reason why the last syllable in *propterea* is long ; but whatever the true explanation be, the same explanation will certainly apply to *quāpropter*. Yet in the text we find *quāpropter* and *trādo* thrown together because they are both compounded, and have both an *a* in the first syllable. On the other hand *propterea*, in Dr. Zumpt's distribution of words, belongs to a class which includes, among others, the imperatives of the first conjugation. In another list we find, in ludicrous juxtaposition, *sēdecim*, *mēcum*, *mēmet*, *venēficus*, *vidēlicet*, whilst *ilicet* and *scilicet* are torn away from *videlicet* to keep company with *ubique*, *ibidem*, &c.

A short chapter on Latin accentuation follows. The value of it we are not qualified to estimate, as we confess we have never yet obtained a distinct conception of the difference between accent and quantity.

The chapters on the declensions and genders of nouns present little novelty, and therefore scarcely require observation. In this, however, and other parts of his Grammar, our author appears to place too much reliance on the authority of the Latin grammarians. It should be recollected that most of these writers lived long after the authors upon whom their comments are made, and at a time too when the very structure, and certainly the idioms of the language, were materially altered. The living tongue of their times was an unsafe standard of comparison ; whilst the relation in which they stood to the writings of Cæsar and Cicero was the same in kind as that in which we ourselves stand. On the other hand, it is much to be regretted, that not one among them possessed any of that philosophical spirit which begins to distinguish modern philology. Those who have been in the habit of con-

sulting the commentaries of Donatus and Servius, or the more systematic work of Priscian, will admit that the testimony of this class of writers, though of occasional value, should always be received with caution. The judgment of even Varro and Quintilian is not always to be depended upon, and their errors of judgment are often aggravated by the particularly corrupt state in which their writings have come down to us.

In the classes of numerals, which are given in great detail, (pp. 103—115) there seems little advantage in proceeding beyond those actually found in Latin authors, more particularly when the author mistakes the analogy which should guide him in the formation of these new words. Most of the following, we are told, are doubtful—*vicecuplex*, *tricecuplex*, . . . . *millecuplex*. It would be more correct to say, that not one of them either does or could exist: *vicuplex*, *tricuplex*, &c. would have the advantage of being analogous with those of the same class known to exist; but why invent new words? and still more, why put them into Grammars?

We were prepared, by a remark in Mr. Kenrick's preface, for a considerable difference between the two Grammars on the very important subject of the pronouns, and, after a comparison, we think the translator did well in taking from other sources the valuable matter comprised in his 67th section. This, however, relates to the signification and employment of the pronouns. We must first consider their formation. In page 62 of the translation we have the following note appended to the inflexions of *hic*. ‘The demonstrative force is strengthened by the affixes *ce* and *cine*.’ In our edition of the original the last syllable of *hicine* (we prefer Bentley's orthography with the single consonant) is correctly considered to be the common interrogative enclitic. In the same paragraph, on the other hand, (and here the translation agrees with the original,) *istic* and *illic* are deduced from *iste-hic*, *ille-hic*. This error has, perhaps, arisen from not perceiving that the final letter in *hic*, *hae*, &c. is no more an essential part of the pronoun than *ce* of *hujusce*. In the common genitive, and other cases, it disappears, and if we never find the dative without the suffix, still a comparison with *ill-ius*, *ill-i*; *e-ius*, *e-i*; *cu-ius*, *cu-i*; *un-ius*, *un-i*; is sufficient to prove that originally *hu-ius* and *hu-i* were alike legitimately formed. The very striking anomalies in the declination of this pronoun all disappear when we consider the suffix in its true light. The ablative was *ho*, hence *ho-die*. The adverb of motion towards corresponded with *eo*, *quo*, &c.; hence we have not *hucvorsum* but *ho-vorsum*, contracted into *hossum*. While, in the same way, *illo* and *isto* existed together with

the strengthened forms, *illuc* and *istuc*. So, again, we have *tunc* and *nunc*, but not to the exclusion of *tum* or even *num* (*ediamnum*); we might easily extend the list. Scheller, indeed, in his grammar, refers, though with some timidity, *hic* to *hice*; as *dic* to *dice*; and, no doubt, it was from the same view that Bentley, as above stated by Zumpt, preferred *hiccine* to *hiccine*. Throwing aside, then, the aspirate from *isthīc*, we may safely conclude, that *istic* and *illīc* were formed, not from *hic*, but by the addition of the same emphatic syllable, which is found in *hic*. But independently of this, *iste-hic* seems impossible, because it is a contradictory combination. It has been correctly stated by Zumpt, that *hic* is the demonstrative of the first person, and *iste* of the second. For instance, the book you are reading is *iste liber*; the words you have uttered are *ista verba*; Cicero, writing to his friend Atticus, inquires how affairs are going on *istic*, i. e. at Rome, where the person he addressed was residing; nay, so completely was this the meaning of the pronoun, that it has descended to the derivative *costi*, in the modern Italian; and a suit, as to the place where a bill was payable, once turned upon this meaning of the adverb. It has been a common error, to consider this pronoun as including the notion of contempt. Dr. Zumpt has justly observed, that in the courts of law, an advocate addressing his opponent would naturally throw something of sarcasm into his tone, when speaking of anything connected with that opponent. This, however, is a mere accident, beginning and ending with the occasion. As to any general inference, we might as well connect the idea of flattery with it, because we find it in Cicero's fulsome panegyrics, delivered in the presence of Cæsar. In fact, it is employed in the comedians, whatever be the temper of mind subsisting between the parties conversing together; whether it be affection, anger, indignation, surprise, sorrow, or indifference. To dwell on these minutiae is far from useless. No one can fully appreciate the meaning of a Latin author, without an accurate perception of the distinction between the three little pronouns, *hic*, *iste*, and *ille*. We cannot find a better illustration of this than in the beautiful scene of the *Andria*, where Pamphilus hurries on the stage exclaiming—

*Hocine'st factu humanum aut inceptu? hocine'st officium patris?*  
*Mysis*, alarmed for her mistress, immediately says, *quid illud est?*—*illud*, for she is speaking to herself. But when she has discovered herself, and, speaking of the distress in which she has left Glycerium, adds—*tum autem hoc timet, ne deserat se*; Pamphilus interrupts her with—*hem, egone istuc conari queam?* A few lines after, where he describes

his last interview with Chrysis,—O Mysis, Mysis! etiam nunc mihi scripta *illa* sunt in animo dicta Chrysidis; by attending to these particles, we shall have a much more lively picture of this interesting scene. At the beginning, Glycerium may be supposed to be standing on one side of Chrysis; Pamphilus on the other. First looking at the latter, and then from him to the friendless Glycerium, she begins :—

Mi Pamphile, *huius* formam atque aetatem vides.

Then turning again from Glycerium, as if she did not wish her to hear the observation,—

Nec clam te est, quam *illi* utraeque nunc inutiles  
Et ad pudicitiam et ad rem tutandam sient.

In the following line we perceive that Chrysis is grasping the hand of Pamphilus :—

Quod te ego per dextram *hanc* oro, &c.

The conclusion is still more graphic—

Si te in germani *fratris* dilexi loco,  
Sive *haec* te solum semper maxumi,  
Seu tibi morigera fuit in rebus omnibus;  
Te *isti* virum do, amicum, tutorem, patrem.

We can here discern the very moment when she resigns her orphan sister into the hands of Pamphilus. She is no longer *haec*, but *ista*.

In Cæsar's writings, where the greater part is simple narrative, and even the speeches are given in the oblique form, we must not expect to meet with the word *iste*; and, accordingly, it is only found, if we may trust the index, in one passage (B. G. vii., 77), where, contrary to his custom, he presents us with a speech in the first person. But, to return to the point whence we digressed, we may now conclude, that the combination *iste-hic* is not less contradictory than would be such a word as *meo-tuus*.

The chapters 37—60, pp. 128—216 inclusive, give the etymological structure of the verb, and will, of course, demand an examination at some length. Our first objection is, that no allusion is made to the more philosophical division of the conjugations adopted in all Greek grammars, and now employed in the small Latin grammar of the Charterhouse—we mean the division into contracted and uncontracted verbs. The more correct name for the same division would be, verbs in which the crude form (that part independent of inflexion) terminates in a vowel, and those in which it terminates in a consonant; contraction is not the criterion, as we see in the forms, *fert*, *vult*. We believe such a division is preferable even for a beginner: but this is not the question here. In the

present grammar some allusion, at least, should be made to it, if it be but in a note. One great advantage of a natural division over that which is artificial consists in the facility the former affords of explaining, on solid principles, those numerous irregularities which appear in every language. We would even carry the Charterhouse division somewhat farther; nor let it be objected, that in so doing, we make grammars more complicated than they already are. Apparent brevity is not always simplicity. What can be more truly simple than dividing the conjugations according to the Greek system of characteristics? Suppose, then, in Latin we were to assign one conjugation to those verbs, in which a consonant is the characteristic, viz. the conjugation usually placed third in order; and five others to the respective vowels: 1st, *a*, (*amao*) *amo*; 2dly, *e*, *neo*; 3dly, *i*, *audio*; 4thly, *o*, as in the stem *no* or *gno*, whence the perfects *no-vi* and *co-gno-vi*; and 5thly, *u*, (stem *argu*), as in *arguo*. Let us press this system a little farther, and judge of it by its results. If the perfects of these verbs are uniform, they will be *amavi*, *nevi*, *audivi*, *novi*, *arguvi*. The four first are the common forms; in the last, as the repetition of the same vowel was unnecessary, *argui* became the form in common use; but the perfect was still distinguished by the older writers from the present. Thus we have a line of Ennius (Priscian x. 2. Krehl, p. 480.)

Annuit sese mecum decernere ferro.

It may well be doubted whether, even in the age of Cicero, the present *arguit* was altogether confounded in pronunciation with the perfect of the same written form. All these perfects, too, were susceptible of contraction in some of the persons, so that we have no reason to be surprised at *monui*, *habui*. That *habevi* must once have existed, is sufficiently proved by the form of *habessit*, which is contracted from *habeverit*, exactly as *cantassit* from *cantaverit*. Contractions are always more likely to occur in long than short words. Hence *neo*, *fleo*, with a few others, retained the original form, whilst the longer words could afford to spare one of their letters. The examination of the so-called supines would again confirm the simplicity of this system.

To this mode of viewing the verbs it has been objected that if *amat* be really formed from *amait*, the last syllable should be long. The inference is legitimate, and, accordingly, we find in the earlier writers that such is the case. At the beginning of the *De Senectute*, there occurs the line—

Quae nunc te coquit, et versat in pectore fixa—

where, in the old editions, as Graevius observes, some critic, alarmed for the metre, had substituted *sub pectore*. The same editor gives another line, quoted by Priseian, from *Livius Andronicus*,—

Cum socios nostros mandisset impius Cyclops—

where the long *e* in *mandisset* corresponds with the long vowel in the other persons of the same tense. He refers also to the authority of the grammarian *Martianus Capella*, for the fact that, in the older poets, ‘*t finale esse ambiguum*.’ This is evidently too indefinite an observation. To the above lines we may add a third, which has hitherto, possibly owing to the apparent irregularity of the metre, been blended with the text of Cicero. *De Officiis*, l. 1, *Ed. Græv.* p. 169.

Si quid dedecet alios, vitemps et ipsi.

Little stress can be laid on the cæsura, where so marked a pause occurs after the very next word.

A second objection to the proposed division may be founded on the class of verbs, *fugio*, *cupio*, *sodio*, &c. This objection, it might be replied, is equally applicable to every division. The true explanation is to be found in the fact that many of the Latin verbs had different forms at different periods of the language, or even at the same period in different places. That *cupio* was looked upon by many as of the fourth conjugation, we have the express authority of Priscian; *cupivi* and *cupitum* are formed according to the analogy of that conjugation; and, in Plautus and Lucretius, we find *cupis* and *cupiri*. St. Augustin was in doubt whether to write *fugire*\*. This is far below the age of pure Latinity. On the other hand, in the Marcian prophecy, given by Livy, it has been long perceived that the verses were originally hexameters. The word *fuge*, at the end of the first line, has been altered by some to *seuge*, to complete the metre. Perhaps it would be more correct to read *fugito*, the more so as the imperative in *-to*, from its more solemn power (arising probably from its greater antiquity), is better suited to the dignified language of prophecy. Lastly, many of the verbs of this termination, *moriō*, *orior*, *sodio*, &c., are generally allowed to partake of both conjugations.

In the enumeration of the irregular perfects of the 3rd conjugation, Dr. Zumpt has judiciously arranged the words according to the final consonant of the stem, after the manner of our better Greek grammars; throwing those

\* It cannot be an accident that in the Italian, French, and Spanish languages, the same conjugation should still prevail: *fuggire*, *fuir*, *huir*.

together which are connected with the same organ. Thus c. 49 contains all the gutturals, or those ending in *go*, *co*, *ho*, *quo*, *cio*, *guo*. He might have added to the list the isolated verb *vivo*, which has arisen from a stem *vig* appearing again in the words *vixi*, *victus*, *vigeo*, *vigor*, *vigil*; just as *nivis* is found in connection with *nix*, *ninguo*, or *ningo*, &c., *conniveo* with *connixi*, *foveo* with *focus*, *Davus* with *Dacus*, &c. This change, though extremely striking at first, is no way peculiar to the Latin; but, to understand it, we must recollect the identity of the Latin *v* and English *w*. Lastly, the word *vigo* is not imaginary; we have for it the authority of Charisius—See *Facciolati*, v. *vigeo*. We may add to the same list some other verbs, in which the present has wholly lost its guttural; viz., *fluo*, *struo*, *fruor*, &c., the perfects and other derived forms shewing clearly that, in all of these, the original characteristic was a guttural. A partial disappearance of this letter has taken place in *traho*, *veho*. On the other hand, from the class having a liquid for the characteristic we should wish to except *pono*, *lino*, *sino*, *sperno*, *cerno*, *sterno*, and, perhaps, *sero* (to sow). In these words, the liquid no more forms a part of the stem than the *n* in *frango*, or the *m* in *rumpo*. The real stem of *pono* is *pos*, as appears from the perfect and supine, and thus in return is explained the anomaly in the quantity of the present. With regard to the six other words, the radical parts are respectively *li* or *le*, *si*, *spre*, *cre* or *cri*, *stra*, and, lastly, *se*. Hence, from the three last are regularly formed *crimen*, *stramen*, *semen*, to say nothing of the perfects and supines.

In the large class of inceptives given in chapter 52, which is stated to include all the most important, we see no reason for the omission of *cresco*, *nasco*, *pasco*, &c., given in a separate list, in the preceding page. It would have been useful also to have had in the same series the deponents *ulciscor*, *irascor*, *adipiscor*, *nascor*, &c. The participles of these are often said to be irregular, whereas they are formed with perfect uniformity, if we refer them to their proper stems, *ulc*, *ira*, *ap*, and *na*, or rather *gna*, &c. It is the custom, in nearly all grammars, to give a separate list of the deponents, of the defectives *memini*, *odi*, &c., and of the specially irregular verbs *fero*, *volo*, &c. Yet, for etymological investigation, it is desirable to have them united in the same series with the common verbs. Thus, if the perfect *odi* were classed with those which are distinguished by the temporal augment, the short *o* in *odium* would cease to be irregular. By connecting *memini* with the perfects of reduplication, we perceive that the radical part is *men*; the same

as that of *commisicor* and *commentus*. *Tuli* again would be known to be a reduced form from *tetuli*, the perfect of *tollo*.

In comparing the translation with our edition of the original, we observe that the one has *increbresco*, the other *increbesco*. Perhaps the difference is intentional, as the repetition of *r* has certainly something offensive in it to the ear. The derivation of *mansuesco* from *mansuetus*, which is common to both, is the same as to derive *consuesco* from *consuetus*. An equally obvious error is the derivation of *potus* from *potare*, *potatum*; for here, undoubtedly, the stream of derivation runs directly the other way, *potus* being the participial form of the stem *po*, whence *po-culum*, *po-tor*, *po-trix*, *po-tio*, *po-tus* (-*us*), and in Greek,  $\pi\omega\mu\alpha$ ,  $\pi\varepsilon\pi\omega\pi\alpha$ ,  $\pi\omega\tau\sigma\varsigma$ ,  $\pi\omega\sigma\iota\varsigma$ .

At chapter 61 commences a department of etymology hitherto unduly neglected, but now beginning to attract the attention of the German, and we hope of the English teacher also—we mean, what in the German grammars is called by the expressive term *wort-bildung*, or word-formation. The distinction between this part and the common accidence of our grammars is, in fact, altogether arbitrary. We are not entering upon any new principle, but only proceeding one step further in that very system of classification which has been found so useful in the early parts of the grammar. An example will best explain our meaning. We will suppose, then, that *fragilitatem* is given for examination. It may be compared first, with such words as *artem*, *sermonem*, *legem*; of these the nominatives are (*arts*) *ars*, (*sermōns*) *sermō*, (*legs*) *lex*. We infer, then, that the nominative corresponding to the proposed word is (*fragilitatis*) *fragilitas*. So far we have not exceeded the inflections of nouns given in all grammars. The next comparison carries us beyond the limits of these grammars, but the process is precisely the same. Thus, *fragilitas* is analogous in termination to *veritas*, *utilitas*, *libertas*, which express, in the substantive form, the qualities of *verus*, *utilis*, *liber*. In the same way, then, is *fragilitas* related to *fragilis*. Again, the termination *ilis* is common to *habilis*, *agilis*, *mollis* (*mov-ilis*). And as these are connected with the respective stems, *hab*, *ag*, *mov*, of the verbs *habeo*, *ago*, *moveo*; so is *fragilis* connected with *frag*, the essential element of *frango*. It will surely be allowed that the classification of which we have availed ourselves in the two last steps is fully as important as that borrowed from the grammatical inflexions at the commencement.

Reversing the process, we may start from the stem *frag*, and carry out extensive branches in various directions on the

same analogical system : *fractus, fragilis, fragilitas, fragor, fragosus, nau-fragium, nucifrangibulum, fragmen, fragmentum, fractura, &c.* in which words the general notion of breaking conveyed in the stem *frag* is modified by the several suffixes, *tus, ilis, ilitas, or, osus, ium, bulum, men, mentum, tura, &c.* It is the business, then, of this department of grammar, to classify words with reference to these important syllables, to assign, by induction, the power of each syllable, and to account for those slight modifications which always take place in the combination of certain letters, and which admit of an easy explanation in the general laws of euphony.

To those who are acquainted with the method of instruction employed in Germany in reference to the Greek, Latin, or even the German language, all these explanatory remarks will be familiar, and perhaps fatiguing. To English teachers in general no apology is necessary. It is certainly desirable that every one connected with education should know that this branch of etymology is at once important and simple.

Having said enough, then, to establish the utility of thus extending the field of grammar, we must return to our author, and see how far he has succeeded in the duty he has undertaken. It is evident that the very first step is, to fix precisely upon the stem, to separate it from what is merely adventitious, and here we more than once find the author somewhat hasty. A few instances have already been pointed out. Another remarkable instance occurs in p. 222, where *nomen* is said to be contracted from *novimen*. It has been already stated, that *no*, or rather *gno*, is, both in Greek and Latin, the parent of a large family of words, of which *no-men* is one. A second objection must be made to the arrangement. The terminations, *-ulum, -culum, -bulum*, it is true, have no difference in meaning, and may therefore be brought under the same class; but still it would be better to separate them and arrange them in different columns. When *vinculum* and *operculum* are brought immediately together, the student is very liable to forget that in *vinc-ulum*, as in *jac-ulum*, the *c* belongs to the stem, while in *oper-culum*, it belongs to the termination. In the section on diminutives very considerable confusion arises from the want of subdivision. It is stated, that this class of words is formed generally in *-ulus, -a, -um*, but sometimes in *-ellus, or -culus, or -olus, or -unculus*; but by what circumstances we are to be guided in the choice out of these five variations we are not told. A simple classification would lead to the true grounds of distinction, but Priscian has saved us all trouble. From what he says on this subject, the two following rules may be deduced.

- a. If the primitive be of the first or second declension, *-ulus, -a, -um* is adopted; the gender depending on that of the primitive.
- b. If it be of the third, fourth, or fifth, *-culus, -a, -um* is preferred.

The exceptions arise from contraction or euphonic variety. If the stem of the first or second declension terminate in *l, n, r*, a contraction generally takes place producing the termination *-ellus, -a, -um*, or *-illus, -a, -um*. Thus, besides *puerulus*, we have *puellus*; and the secondary form *puellula*. If it end in *i*, or *e*, then *-olus* is written for *-ulus*. With respect to the other declensions, if the stem end in any of the harsher consonants, *c, g, t, d*, the first termination without the guttural is naturally preferred. If it end in *on*, then *-unculus* is written instead of *-onculus*. As examples of the assistance to be derived from this subdivision, a few of the apparently more irregular words are here given. From *lamina* and *columna* we have *laminula*, *columinula*, contracted into *lamella*, *columnella*; from *bonus*, or, rather, *benus* (the old form whence *bene*, *beneficium*, *benivolus*, *benignus*) we have (*benulus*) *bellus*, expressing the quality of *bonus* in a petty way. Similarly from *unus*, *illus*; from *castrum*, *castellum*; Tullia makes *Tulliola*, not *Tulliula*, just as *violentus* is preferred to *viulentus*, notwithstanding the forms *fraudulentus*, *opulentus*. In *ratio*, *rationis*, it is evident that *ration* is the stem; hence we have *ratiuncula*. In *homo*, *hominis*, the radical part is less distinguishable, as both these cases have suffered alteration. *Homō* is the real stem (in Ennius we find *hemones*); and from *homon* we have again *homunculus*. The corruptions of *homons*, and *homōns*, into *homō*, *homīns*, are neither of them extraordinary.

In Zumpt's grammar the apparent difficulties sometimes arise from referring the diminutive to the wrong primitive. Thus, *catellus* is formed, not from *canis*, as Zumpt, and even Priscian have imagined, but from *catulus*, just as *ocellus* from *oculus*. Indeed, from the feminine *canis*, we possess the regular diminutive, *canicula*. Again, the diminutive of *rana* is *ranula*, not *ranunculus*. The great tendency of the Latin language to form diminutives, which is well exhibited in the successive oxos (*Hesych.*), *oculus*, *ocellus*, *ocellulus*, is the more worthy of notice from the great effect it has had on the vocabulary of the modern Italian, and even the French. We must not omit to note, from Priscian, the termination *-xillus*, adopted for those words whose stems end in *l* preceded by a long vowel. Thus, *paulum*, *pauxillum*; *velum*, *vexillum*; *mala*, *maxilla*; *palus*, *paxillus*, &c. In the article on adjectives in *-tus*, formed from nouns

without the known intervention of any verb, it is correctly stated, that though *-atus* is the more common ending, a few terminate in *-itus* and *-utus*; but the distinction upon which this variety depends is not given. This distinction turns upon a principle affecting the whole etymological structure of the language. We have already recommended a division of the verbs founded on the nature of the alphabet. The same principle of division may be applied to the declensions. Thus we shall have one declension where the characteristic is a consonant, viz. *rex*, from the stem *reg*; and five others corresponding to the several vowels, viz. *u*, *musa* or *Aeneas*; *e*, *fides*; *i*, *turris* or *mare*; *o*, *avus* (*avos*); *u*, *status*. Our limits will not allow us to develop all the advantages arising from this natural division. The result of such examination would be, that the case-endings were originally the same for all the declensions, and that the varieties have arisen from the combination of the stem vowel with these *postpositions*, as we may call them, of the several cases. Of course, in such an inquiry, allowance must be made for those changes which time produces in every language. The chief novelty of this division arises from the separation of the third declension into two. One advantage of this is the explanation of the prevalence of the letter *i* in certain words of this declension, viz. *turrim*, *turri* (abl.), *turrium*, *turris*. The adjectives *mollis*, &c. (for adjectives are etymologically identical with substantives) will afford similar examples. Hence we see the reason for the marked connexion of this declension in *i*, with the verbs of the fourth conjugation, *mollis*, *mollire*; *tussis*, *tussire*; *sitis*, *sitire*; *lenis*, *lenire*, &c. And lastly, to apply our observations to those words, from the consideration of which we digressed, *auritus* and *pellitus* are the very forms to which analogy would lead; whilst, on the other hand, from *status*, *acus*, *cornu*, *astu*, we have *statuo*, *acuo*, *statutus*, *acutus*, *cornutus*, *astutus*. Neither is *nasutus* a very irregular form, when we consider the convertibility of the vowels *ō* and *ū*, or *ō* and *ū*; and the consequent confusion in so many words between the second and fourth declensions. The readers of Sallust and Plautus will not be at a loss for examples.

In page 184 of the translation, upon the composition of verbs with particles, we observe a slight inaccuracy: 'so also when a consonant follows,' copied indeed from the German 'so auch mit folgendem consonanten,' but which it is of importance to correct, as the choice of the vowel *e* or *i* generally depends on the very question, whether one or more consonants follow. Thus from *facio* we have, in one

case, *conficio*, in the other *confectus*. The closing paragraph on this subject in the original, and still more the corresponding passage in the translation, we do not comprehend. 'When nouns and verbs are compounded, the second word undergoes more violent changes, which are not capable of being reduced to rules.' In the original the examples given are *artifex*, *pontifex*; *particeps*, *anceps* (*auceps* is intended); *cistifer*, and *aquilifer*; *claviger*, *armiger*: which are said to be formed in a manner 'gegen die oben angegebenen ableitungssarten.' To our eyes (for it seems matter of eyesight) no words could have been selected presenting less irregularity. The truth is, euphonic changes are made, not with reference to parts of speech; not because such a word is a verb, and such a noun or particle, but strictly and solely upon physical reasons, in consequence of certain vowels and consonants falling together. Thus we have *discerpo*, *artifex*, *iners*, *expers*, *profecto*, *biennium*, &c.

We proceed to the division on the particles, which occupies in the original a very considerable space, pp. 239—311. No department of grammar is more worthy the attention of the student, and in none is the system of classification more fruitful in useful results. Though both the original and the translation (we say both, for they by no means correspond), present much useful matter, the contents would be more available to the student, if they had been arranged in a tabular form. As all these particles have a double relation, the classification also should be double, according to the root and the suffix. This would be effected by placing the stems in a horizontal line, and the terminations in a perpendicular column, when each word would thus appear under its stem, and on a level with the qualifying suffix. Thus under the crude form *ali-cu* (*aliquis*) we should find: *alicu-bi*, *aliqu-o*, *alicu-nde*, *aliqu-a*, *aliqu-o-versum*, *aliqu-a-tenus*. On the other hand, one of the horizontal columns would be *eo*, *huc*, *illo* and *illuc*, *isto* and *istuc*, *eo-dem*, *quo*, *quo-cunque*, *quo-quam*, *quo-piam*, *quo-nam*, *quo-vis*, *quo-libet*, *quo-que*, *ali-quo*, *si-quo*, *ne-quo*, *utro*, *utro-que*, *utro-libet*, *ne-utro*, *alio*, *dextro* (-*vorsum*), *sinistro* (-*vorsum*), *intro*, *retro*, *ultra*, *citro*, *contro* (-*verto*), in all of which the final *o* modifies the power of the stem in precisely the same manner. This termination, by the bye, has nothing to do with the ablative. It is more probably to be deduced from an old accusative in *om*; exactly as *postea*, *interea*, *antea* have been formed from *post eam*, &c. the correlatives *postquam*, *antequam*, still retaining the final letter. As the accusative is essentially the case of motion to, so the original power of the dative is rest. Hence

we are not surprised that the adverbs of rest should be, without exception, the old datives of their respective stems : *ibi* from *is* ; *ubi* (originally *cubi*, whence *si-cubi*, &c.) from *quis*, *illæ-c* from *ille*, &c.\*

A student, with such a table as we have proposed, would soon make himself acquainted with the precise value of the most important words in the language ; important, because they enter into the constitution of every sentence. He would learn this portion of the vocabulary with the utmost facility, and would remember it with certainty.

The following sections, to the 68th inclusive, treat of the power and position of the prepositions and conjunctions. These subjects being no way connected with etymological principles, it does not fall in with our present purpose to speak of them.

It has been already remarked, that in the Syntactical part, this work is far superior to the ordinary grammars. It is for this very reason that we have not entered into a particular discussion of that department in the present article. We thought it would be more useful to direct attention to the etymological division of the grammar, which is less exact than it ought to be.

\* It is singular that this power of the dative suffix, now so familiar to scholars, and at the same time so essential to the right understanding of the syntax, should never have made its appearance in our grammars, where we still find 'museæ, to a muse,' to the utter confusion of the language. After this fundamental error, we cannot be surprised that the syntax should direct us to translate *at Rome* by the genitive, *at Athens* by the ablative, &c. giving different rules according as the number or gender differ, while, in fact, they are all datives. With *Romeæ*, *Athens*, there is no difficulty. As to *Beneventi*, *domi*, &c. an earlier form of the dative of the second declension was *oi* (*ουι*) whence arose the double form *nulla* and *nulli*. In the plural the two languages exhibit the same analogy : *δευλαι*, *δευλαις*, in Greek, and in Latin *pueri*, *pueris*. In the third declension a common occurrence has taken place. Our grammarians, instead of forming their rules from the writings of the ancients, have altered their text to fit the rules. Thus our editions often present *Carthagine*, *Lacedæmon*, where the MSS. have the correct dative. It is true that authority exists for the other form ; but the change of *Carthagini* into *Carthagine* is precisely similar to the change of *heri* into *here*, *pictai* into *pictæ*, and not unlike the absorption of the *i* in the datives of so many declensions, Greek and Latin, *gradui gradu*, *fidei fide*. In the third declension the preceding consonant saved it from total extinction. The commonest effect of time upon a language is to soften away the final letters. Hence *miraris*, *mirare*; *agier*, *agi*; *ipse*, *ipse*; *gus*, *gi*; *fuerint*, *fueri*; *homō*, *homō*; *īyān*, *īyā*; *ēgō*, *ēgo*; &c.

## EGYPT, NUBIA, &amp;c.

*The Modern Traveller.—A popular Description, Geographical, Historical, and Topographical of the various Countries of the Globe.* By Josiah Conder. London : Printed for James Duncan, &c., 1827. 30 vols. 18mo.—*Description of Egypt, Nubia, and Abyssinia*, in 2 vols., 18mo. Price 11s.

THE object of this undertaking will be best explained in the Editor's own words :—

'To give the results of modern discovery, combined with our previous stock of information, in a succinct and popular form, so as to exhibit, at one view, the present state of our knowledge, with regard to each country traversed by European travellers, was the object proposed in undertaking this work.'

The thirty volumes comprehend (as he goes on to observe) ' all the regions of the east, of the western hemisphere, and of Africa, which are accessible to the European traveller ; they include, also, a description of eastern Europe, and of the western Peninsula (Spain and Portugal) ;' but France, Germany, Holland, Switzerland, and Italy, are reserved for another series, as the editor considers, that countries comparatively so well known require a different kind of description.

The volumes on Egypt, which are selected for the present notice, besides containing a topographical description of the country, comprehend a short account of the physical geography, the natural history, the climate, and political history of this singular portion of the globe ; and all this information, it should be remarked, is included in two small volumes of less than four hundred pages each.

At the end of the second volume, a list is given of the principal authorities from which the history and description of Egypt, Nubia, and Abyssinia are taken. In the body of the work, also, frequent references at the foot of the page, point out to the student the sources of particular information, and shew him where he may look for more complete knowledge. We cannot help wishing that other compilers of the present day would do the same ; it would increase their reputation for candour and fair dealing, though it might somewhat diminish the opinion of their erudition.

There is, perhaps, no one country in the world which presents so many interesting objects of inquiry as Egypt, if we consider its physical peculiarities, its ancient monuments, its political revolutions, and its actual condition. It lies

between the barren regions, that form its eastern and western boundary, a long and narrow slip, fertilized by a river, on whose periodical overflowing depends the very existence of its inhabitants. In all ages it has been the granary of the neighbouring countries, the centre of an extensive caravan trade, and during many centuries, the market in which the products of the eastern and western worlds were exchanged.

In its earliest state, Egypt was governed by native monarchs in alliance with a powerful caste of priests, whose influence, and whose tyranny, are attested by those imperishable monuments, which we still behold with wonder. But it is now nearly twenty-five centuries since a native Egyptian ruled in the land. Since the overthrow of the throne of the Pharaohs, the barbarous Persian, and the more civilized Greek, Roman, and Arab have, at different periods, possessed it, each leaving behind him some traces of his dominion. This country now groans beneath the yoke of the Turk, the heaviest bondage which it has yet experienced. Its future condition is doubtful, and it will, probably, once more change its master, not by the choice of the people, but by the fortune of war.

In the fifth century before the Christian æra, Herodotus of Halicarnassus, by birth a Greek, and most probably a merchant by profession, visited Egypt, which was then under the dominion of the Persians. His description, contained in the second book of his history, has furnished ample materials for modern criticism; it bears the same stamp of truth, honest intention, and simplicity, which characterizes the whole of his work; it is not free from errors, both of observation and of judgment, but it still remains one of our best sources for the study of Egyptian antiquity. The long dominion of the Greeks, which was succeeded by that of the Romans, brought many travellers and adventurers into the country; and, accordingly, we find, in the Greek and Roman writers, numerous incidental notices, together with some particular descriptions of Egypt, such as those of Strabo and Diodorus. Under the Arabs, too, this country of wonders was not without its geographers and historians, whose accounts are often useful and necessary in our topographical inquiries. Modern travellers, of various merit, have added to this stock of information; some by giving us the results of long and patient investigation; and others by an ostentatious display of the little that is to be gathered in a sail up the Nile, and a journey from Kennéh to Cosseir.

It is from this wide field that the editor has undertaken to collect the materials for his two volumes; for though, in many instances, he does not appear to have examined the

ancient travellers and geographers himself, yet he has used the modern books, into which the ancient learning is transferred ; his design, therefore, is a *learned* one, notwithstanding the title of *popular*, and the unpretending form in which the ‘Modern Traveller’ appears. It is also a useful design, having for its object the communication of many valuable facts, that require to be collected and arranged before they can be generally known. The abundance of materials increases the difficulty of the undertaking : where one traveller only has visited a country, there is not much room for difference of opinion, or for dispute ; but where many accounts are to be compared, contradictions are discovered, and selection becomes more hazardous.

The etymology of the name Egypt, a word for which we are indebted to the Greeks, engages the editor in a kind of discussion, strengthened by some learned notes, which is rather at variance with the word ‘*popular*’ in his title-page, and will not be satisfactory to those who look for a complete dissertation.\* He is inclined to suppose that *Ægyptus* (*Αἴγυπτος*) is equivalent to *Aia-gyptos*, the land of *Gyptos*, or *Kyptos*. It is, indeed, probable that the word Egypt contains the element *Copt*, the name by which the present real or supposed descendants of the old Egyptians are known ; but the prefix *Ai* is, undoubtedly, nothing more than a vowel sound, such as is prefixed to many roots, both in Greek and other languages, without adding anything to the signification. Thus the Asiatic name *Frat* became Euphrates in the mouth of a Greek.

For the general physical description of the country, the editor makes use of an extract from Malte-Brun’s Geography ; and its geological structure he explains by giving another extract of considerable length, from an article in the *Encyclopædia Metropolitana*. It is his general plan to give the very words of various travellers and authors, when their description can be readily jointed into his own ; a plan which has this merit,—that it supplies the reader with some valuable extracts, otherwise often difficult to meet with, and relieves the uniformity of a compilation, by the variety of personal adventure, and original description.

The true basis of the history of every country is a knowledge of its geographical features, and its products : the more exact this knowledge is, the better we comprehend both ancient and modern writers. In Egypt this is

\* It is, in substance, the same as the remarks in the *Encyclopædia Metropolitana*, on the etymology of the word ‘Egypt.’

more particularly necessary. Its agriculture and domestic arts; its ancient, civil, and religious systems, with all its wonderful existing monuments, are the offspring of local peculiarities.

In the granite rocks of Upper Egypt, which extend but a short distance from the island Philæ, as far as Syene (Essuan), we may still survey the quarries which supplied the materials for the colossal statues and the obelisks scattered over all Egypt, from its southern extremity as far as Tanis (San) on the eastern, and Alexandria beyond the western limit of the Delta. The history of some of the specimens of Egyptian skill is curious. With immense labour they were cut, in one solid mass, from the quarries in Upper Egypt, and thence transferred to ornament the towns and temples of the lower country. The Romans transplanted them to Italy to adorn their capital; and in our own metropolis, we can now examine some of the most striking specimens of Egyptian sculpture. Between Syene and Esneh (the ancient Latopolis) lies the sandstone district, which furnished slabs for most of the temples; and beyond this region we find the calcareous stone, which extends to the apex of the Delta, and supplied the materials for the Pyramids. There are some inaccuracies in this part of the work, which should be noticed for the benefit of young readers.

The Editor, while following Malte-Brun in his description of the mountains that hem the river, remarks that at Siout (Lycopolis), the western mountains begin to recede further from the river and extend *southward* to Fayoom. *Southward* is an error, perhaps, of the press; it ought to be *northward*.

It has been observed of the Nile and some other inundating rivers, that the alluvial banks are higher above the level of the water, than the land which lies further from the stream. The depth of the earthy deposit therefore varies: 'it is,' says the Editor, (p. 18,) 'in general about five feet near the river, *increasing* gradually as it recedes from it.' But at p. 42 we find Dr. Shaw quoted to prove that, while the soil near the banks is sometimes thirty feet high, 'at the extremity of the inundation it is not a quarter part of so many inches.' The origin of the error is in the Encyclopædia Metropolitana, where there is, by some odd mistake, *increasing* for *decreasing*; and in this instance unfortunately the Editor has given the facts, the arguments, and the blunder of the original article without informing us of his authority. Hamilton's explanation (p. 295) is short and intelligible: 'throughout the whole of Egypt, the banks of the river, and the lands immediately

adjacent, are much more elevated above the bed of the river, than those further off, owing to the greater deposit of mud.\*

There is some difficulty in reconciling antient authors in their accounts of the mouths of the Nile, and of the names assigned to them. The Editor in general keeps close to his Encyclopædic guide, here as on many other occasions. It is surprising that neither of them appears to have made much use of Major Rennel's Geography of Herodotus.

The labours of Major Rennel and D'Anville should not be overlooked by any persons who write on the antient geography of Egypt. In all dubious points these two great geographers will be found the safest guides; and when led astray, it is only where error was unavoidable from the want of proper sources of knowledge.

The writer of the article in the Ency. Metrop. (for it is not possible to avoid speaking of him in connection with the Modern Traveller) begins his description of the Delta by saying, ‘at †Bahr-el-Bacareh, (antiently Cercasorum,) the Nile divides into two nearly equal branches.’ Now nothing is more clearly established than that the apex of the Delta has moved downwards; that the point where the *two* main streams, those of Rosetta and Damietta, *now* separate, is not the point where the Nile, *in the time of Herodotus*, (II. 17.) divided into *three* main streams; and consequently that Cercasorus is *south* of the present head of the Delta, and does not correspond to Batn-el-Bacareh. Major Rennel's arguments are decisive, but cannot be compressed into a few sentences. (See Geogr. Herod. section xviii.)

We can give Herodotus credit for being exact in laying down the three great arms, the Canopic, the most western,—the Pelusiac, forming the eastern boundry of the Delta,—and the Sebennytic, which lay between them: the position of the Bolbitine, and probably that of the Mendesian also, was known to him; *his* Saitic is the Tanitic of Strabo; and *his* Bucolic *may be* the Phatnitic of Ptolemy and Strabo. The writer in the Encyclopædia says that the ‘third arm, called the Saitic, (he is following Herodotus,) was the western branch of the Sebennytic, and derived its name from Sais, confounded with Tanis by Strabo.’ All this is mere assumption: Herodotus gives us no reason for supposing that the Saitic arm was a *western* rather than an *eastern* branch of the Sebennytic.

\* The same phenomenon is observable in those parts of the Mississippi, and its tributaries, that are subject to inundation. See the ‘Discoveries made in exploring the Missouri, Red River and Washita. Washington, p. 186.’

† The error in this name is corrected by the Editor, p. 234.

Nor does Strabo confound Sais and Tanis, though he has made many a blunder quite as great; and lastly, how is it likely that the Saitic, if it were a branch of the Sebennytic, would take its name from Sais, a town situated near the banks of the Canopic arm? This confusion has been transferred into the pages of the 'Modern Traveller.' In p. 48, we are told that the Saitic or Tanitic branch issues from the Sebennytic on the *west*; but at p. 51, that the Tanitic arm is *east* of the Sebennytic, (which is quite true,) and corresponds to the canal of Moez. Major Rennel (p. 519) has been led into a mistake by the mistranslation of the words ἔστι δὲ καὶ ἐργα διφάσια στόματα, &c., Herod. II. 17., but his sagacity detected what he supposed Herodotus ought to have said, and what he really did say.\*

Though it is somewhat tedious to enter into these details, it is necessary for the just appreciation of the book before us. The antient and modern descriptions of Egypt are inseparable, and it is desirable to know how far the Editor may be a safe guide to those who study antient Geography. That his compilation will be exceedingly useful to classical students, may be fairly admitted; but it should be read with caution as an authority.

The great wall of Sesostris, extending from Pelusium to Heliopolis, we are told, (vol. i. p. 79,) was in length  $187\frac{1}{2}$  miles. This is taken from the Ency. Metropol. (p. 431), where we find the following passage: 'Sesostris, as Diodorus informs us, (I. 57.) carried a wall across the uninhabited country from Pelusium to Heliopolis, a space measuring 1500 stadii, (187 $\frac{1}{2}$  miles,) exactly the same distance as that mentioned by Herodotus (II. 17.).' There is nothing surprising in this coincidence between an original and a copy: Diodorus copied Herodotus, the Encyclopædia Metropolitana copied Diodorus, or some copier of Diodorus, and Conder copied the Encyclopædia; and all of them are wrong. From the obelisk of Matarieh, which stands on the site of Heliopolis, to the ruins of Pelusium, is about 75 geographical miles in a straight line, as may be seen by the inspection of any accurate map. If we allow with Major Rennel 10 miles more for deviation from a straight line, the road distance will then be only about one half of what is stated in these two modern writers. Major Rennel's explanation of the passage of Herodotus (II. 7.) may be seen in his Geography, p. 18, &c.

\* In the same chapter the words οὐδὲ τὸν Δίλτυον, &c. are also mistranslated in the Major's quotation (p. 519); and he is led to make some remarks which he would have omitted, had he known the real meaning of Herodotus. Major R., as he tells us in his preface, generally used Beloe's translation, which is often inaccurate.

In examining the Editor's historical sketch it is necessary to bear in mind that it is confined to about one hundred pages, a space much too small for any work professedly written on Egyptian history, yet ample enough to contain a distinct exhibition of the striking facts and different epochs. The chief value of this portion of the work consists in some well selected extracts. Antient Egyptian history, it should be observed, is of a traditional character; it was connected with, and is nearly altogether dependent on the public monuments, on which were frequently preserved little more than the names and titles of kings. With the reign of Psammetichus, and under the free trade system of Amasis (Herod. II. 154. 177. 178.) which brought into Egypt Greeks and other strangers, an era of more historical probability commences.

Whatever success may attend the ingenious decipherers of antient Egyptian writing, it is extremely doubtful whether we shall obtain any very important historical results. If, however, existing monuments can be assigned to their right epochs, a great step is certainly made, and the history of Egyptian architecture and art may receive considerable illustration. But we must be on our guard against the chronologers, who aim at a precision not attainable, and who have erred in converting into successive dynasties of *one* kingdom, the contemporaneous annals of *two* or more sovereign states of Egypt. The Editor has made an observation to this effect, p. 86.

An extract from Dr. Vincent's *Periplus*, comprehending a short view of the commerce of Egypt, and its early connection with the east, (p. 65.) is well adapted to lead the young student to consider history in one of its most instructive forms. That Egypt was at a very remote period a great centre of trade, and the high way of Indian commodities, is proved by the book of Genesis (chap. xxxvii.), where we find the Ishmaelites (the carrying Arabs of the desert) conveying into Egypt the precious spicces of the east.

However difficult it may be to assign many particular events of antient history to their exact epochs, it is generally practicable to give them their relative position in the chronological scale. Yet, nothing is more common in carelessly written books, than to find authors and events, belonging to remote and different eras, quoted indiscriminately as belonging to one period. An example of this occurs, p. 88, where the Editor is speaking of the circumnavigation of Africa by the Phoenicians in the reign of Necos, King of Egypt. Instead of making any remark of his own on this wonderful expedition, he gives a quotation from Brewster's *Encyclopædia*

(Article, Egypt), from which we learn that the authority of Herodotus cannot be doubted, because 'in those early times the Phoenicians sailed to Britain for tin; Hanno established colonies on the western coast of Africa; Scylax came from the Indus to the Red Sea; Nearchus passed from the Indus to the Euphrates; and the fleets of Solomon made long voyages in search of gold and precious merchandise.' Note, p. 88.

According to the common chronology, the voyages of King Solomon are fixed at about the year 1000 b. c.: the circumnavigation of Africa by these Phoenicians about 600 b. c.; and the voyage of Nearchus, the admiral of Alexander, is placed about b. c. 325. Setting aside, then, any comparison between the difficulty and hazard of sailing round Africa, and sailing from the mouth of the Indus to that of the Euphrates, the proof from chronology stands thus. A very long and dangerous voyage made in 600 b. c. is probable, because one of less difficulty was made b. c. 325, about 300 years later. Just in the same way it is probable that Madoc the Welshman crossed the Atlantic in a crazy ship, and discovered\* the northern parts of the new world 300 years before Columbus, as it is said, because Christopher Columbus did discover America in 'those early times.'

The introduction and progress of Christianity in Egypt require, as the editor justly observes, a better history than we possess. It is from Gibbon that he gives a brief outline of those early abuses of the Christian religion which filled Egypt with anarchy, her capital with theological quarrels, and the deserts and oases with swarms of hermits. The Editor has not made any extract that could well offend the scrupulous, or undermine the faith of his youthful readers. The general tenor of his own remarks is that of fervent and sincere, though not ostentatious, religious feeling: he reads the narrative of Gibbon with mistrust (as he remarks in a note at the end of the extracts); but, 'after every possible deduction,' he admits 'the substantial truth of his revolting statements.'

The history is brought down to the present time by a sketch of the life of Mohammed Ali, the present Pasha of Egypt. The adventures by which a tobacco merchant has become the tyrant and proprietor of the kingdom of the Pharaohs are worth recording, as they are characteristic of the unsettled state of the social system in the east, where the condition of slave may be exchanged for the rank of tyrant by any one who has cunning and courage enough to make the attempt. Mo-

\* See Herbert's Travels, ed. 1638.

hammed Ali's adventures, and the remarks that follow on the different races of people in Egypt, form the most interesting and best executed part of the historical outline.

We now come to the main subject of the work, the topographical description. The part that the Editor commences with is the Delta, and the city of Alexandria, the antient capital of Egypt. Of the general description of the Delta it is only just to speak in terms of commendation: it offers to a young student, and to those readers who have not time to be students by profession, a great variety of useful information not before collected in any one book. Many of the extracts are well chosen, and taken from books not generally to be found, except in public libraries.

But the modern Delta cannot be described without reference to the ancient Delta, for the associations connected with its localities belong more to remote ages than to later times. Its existing antiquities, wherever they are found, attract our attention, and we are eager to identify the remains of *Sa el Hadjar* and *Tel Basta* with the colossi and sphinges of Amasis at Sais, and the beautiful temple at Bubastis. Even where the traces of cities and temples have disappeared, we labour to assign some probable position to the great works of Egypt, which still exist in the ever-fresh description of the antient traveller of Halicarnassus.

On the route from Alexandria to Rosetta the voyager may sail along lake *Etko*, as Captain Light did, and he will see, near the sea coast, the modern town of *Etko*; but he must not imagine with the Editor (p. 215) that he has discovered the site of the ancient Naucratis, the Corinth of Lower Egypt in the time of Herodotus. Nor can we admit, with the Editor, that *Etko* is probably a corruption of Naucratis. The site of Naucratis must depend on that of Sais, which, there can be no doubt, corresponds to *Sa el Hadjur*, about two or three miles from the Rosetta branch, in lat.  $31^{\circ}$  nearly. The Editor has collected the various remarks of travellers on the ruins of Sais, or the modern *Sa*, from which we may infer, as he does, that there is both confusion and discrepancy in their accounts. One traveller whom he quotes, whose description is the most minute, we are not inclined to take as a witness. There can, however, be little doubt that *Sa el Hadjur* is an ancient site, and also the site of Sais. The term *El Hadjar* denotes the rock or ruins, and in the Delta it indicates an ancient town or temple, just as Castri, Poli, and Chester do in other countries. Major Rennel has considered *Sa* as representing the ancient Sais, and *Sa el Hadjar*, which he calls Salhajar, as the representative of

**Naucratis**; the origin of the error is partly due to the travellers. If Sais be represented by *Sa el Hadjar*, as we believe it is, we know where to place Naucratis. It was not on the coast (Herod. II. 97), but on the river, and as a man sailed from Canobus to Naucratis he would pass Anthylla and Ar-chandrus, in taking the direct line, when the country was flooded. Again, it was in the Saitic nome (Ptolemy; Strabo, Egypt), though Pliny makes for it a separate nome, called Naucratites (v. 9). The description of Strabo (p. 803, Casaub.) clearly shews, that in sailing from Schedia (itself above Canobus) to Memphis, many towns were passed before arriving at Naucratis: the next town to Naucratis is Sais, not on the river, but two schoeni\* from it. Thus, by the aid of a good map the position of Naucratis may be assigned within certain limits; but *Etko* is at least twenty-five miles from any position that can be fairly supposed to correspond to it. The object of this explanation is to shew that the Editor has not examined the question, and that students of antient geography should not be misled by random assertions.

Another instance of the same hasty decision occurs (p. 234, note), in speaking of the situation of Sebennytus. The modern Arabic name of *Semenhood*, and the identical Coptic term *Sjennout* (Champollion, *Égypte sous les Pharaons*, ii. p. 192) are considered by all geographers and antiquarians to be the same as Sebennytus. Some small remains also mark the site. But the Editor can see 'nothing in common' between the Coptic and the Greek name; 'and for the present,' he adds, 'Sebennytus may be assumed to be *Sheibin el koom*.' This assumption has no one reason or argument to support it: even Ptolemy's latitude, which may have led the Editor astray, will prove, when compared with the latitude of Busiris, (the site of which is certain,) that Semenhood is the true position. The student should examine these places in Leake's or Jomard's large map. We omit to mention other instances of similar errors, because enough has been said to put him on his guard.

A few remarks on the site of Memphis may be useful.

The ancient capital of Misraim, or lower Egypt, was Memphis, built, according to Egyptian tradition, by Mēn, their first king. He commenced also the great temple of Hephaestus, or Phtha, which was enlarged and embellished by succeeding kings as late as the time of Amasis. Sesostris, the great Egyptian conqueror, the three hundred and thirty-second in descent from Mēn (according to the tradition of the priests,

\* Major Rennel (p. 529) has fallen into an error, in saying that Strabo makes Naucratis two schoeni from Sais.

Herod. II. 100, 102), erected six colossi in front of this great national temple, two representing himself and wife, each forty-five Greek feet in height; and four statues of his children, each being in height thirty Greek feet. But Amasis made a colossal figure seventy-five feet in length, which was placed in a horizontal position in front of the temple, flanked by two other figures of smaller dimensions. Successive monarchs vied with one another in extending and beautifying this enormous temple, as the Roman pontiffs did in the decorations of St. Peter's at Rome. Memphis was, in the time of Strabo, still a populous city, and next to Alexandria in importance; but so great has been the devastation effected by force\*, or by the operation of natural causes, that even its site has been the subject of much discussion. The Editor of the Modern Traveller, following in part the Encyclopædia Metropolitana, has not placed this subject in its clearest light, and his conclusion, that the remains at *Metrahenny* (*Monyéh Rahinéh*) are those of Acanthus, and not of Memphis, is a mere conjecture, inconsistent with known facts. The long explanation or dissertation of Dr. Shaw, which the Editor calls 'a clear and learned train of argument,' (p. 341) contains a misinterpretation of Herodotus, and a fundamental error, in supposing the apex of the Delta to be now where it was formerly. The Doctor also neglects those authorities which are decisive.

Major Rennel's examination of the site of Memphis (p. 494) is one of the clearest and most satisfactory of his numerous acute investigations. His proof is founded principally on Herodotus (II. 97), from which it is clear that the pyramids of *Jizeh* were between Cercasorus and Memphis; and on the Antonine Itinerary, which gives an equal road distance between Heliopolis and Babylon, and between Babylon and Memphis. But besides these, there are various other confirmatory arguments. The merit of Major Rennel's discussion about the ancient course of the Nile, with respect to Memphis and the mountains, is increased by the circumstance of his being ignorant of the Greek language, and his having an incorrect translation of Herodotus (see p. 500) as his only guide; with admirable sagacity he has proved, from an absurd or unintelligible version (p. 502), that the meaning of Herodotus must be that which every ordinary proficient in Greek will readily discover in the original. It cannot be doubted that the position of Memphis has been fixed, with propriety, at Metrahenny; but it must not be understood that anything is affirmed about the extent of this great city. All

\* Its stone buildings furnished ready worked materials for such places as *Cairo*, *Fostat*, &c.

that can be proved is, that Metrahenny is within its limits : and it is some confirmation, that on this spot the French found many remains, and an enormous fist \* of a colossus, which it is calculated might belong to a figure forty-eight English feet high, probably one of the colossi of Sesostris.

The Editor (vol. i. p. 341), after speaking of Dr. Shaw's 'clear train of argument,' quotes Edrisi (from the Encyc. Metropol.) as confirming it. To understand the Arabian geographer, it should be premised that the mountain range, east of Cairo, and bordering on it, is called *Mokattam* : south of Cairo is *Fostat*, and a little south of *Fostat* is *Misr el Atik* (old Misr), all on the east side of the river. Abdallatiph (De Sacy, pp. 184, 185) distinguishes *Fostat* from *Misr el Atik*, and so does Mr. Browne (p. 488); but the maps do not. Now when Edrisi says, that *Ain-shems* (Heliopolis) is north of *Fostat*, and that *Menf* (Memphis) is south of it, and that both of them are in the neighbourhood of Mount *Mokattam*, it is clear that he supposes the remains of Memphis to be on the *east* bank. Neither the Encyclopædia, nor the Editor has any remark on this error. Again Abdallatiph (De Sacy, p. 184) describes immense remains of Memphis, which filled him with astonishment. He says they are south of *Fostat* and at *Misr el Atik*: if so, they would be on the *east* bank also. But it is evident from the first chapter of Abdallatiph (page 5), that he knew Memphis to be on the *west* bank of the river. Abdallatiph, then, probably writing from memory, transferred the name of old *Misr* to the remains of *Metrahenny*. Whatever may be the origin of this confusion, it should not be copied into modern books without a remark. As to *Misr el Atik*, says Edrisi, it is called *Babilonah* in the strange tongue : it is, in fact, the site of the Egyptian Babylon. (See Strabo, p. 807.)

The remarks on the site of Memphis have been rendered necessary by the long antiquarian and geographical discussion of the Editor, and with the view of shewing, that in the department of comparative geography the work is sometimes inaccurate and imperfect.

There is another objection which it hardly came within the plan of the 'Modern Traveller' to remove. The descriptions of antient remains †, for example those of Thebes, though minute, and taken from the best authorities, are

\* This enormous fist is in the British Museum, room of Egyptian Antiquities, No. 7.

† We recommend those who have read about Egyptian Antiquities, without the aid of plates, to consult the 'Description de l'Égypte,' the 'Travels of Belzoni,' and 'Minutoli.'

almost unintelligible to young students for want of corresponding engravings. How much additional value would have been given to the work even by a few common outlines, may be inferred from one instance. A small engraving (vol. ii. p. 177) of the temple of *Edsou\** (Apollonopolis the Great), renders the description intelligible, and presents the reader with a tolerably distinct conception of the general plan of an Egyptian temple.

It would require much more space to examine completely these two volumes of the 'Modern Traveller.' On the second no remarks have been made, but we have read it with attention. So numerous are the objects of inquiry in Egypt, that to review completely a description of the country is almost the same thing as to write a new one. The censure that has been occasionally passed on the present work applies chiefly to one department (but it is a very important one), that of comparative geography, or the assigning of ancient towns to their proper modern positions. Though it is not without faults on this head, and also in other respects, we believe that it will be found a very useful book, both for general readers, and for classical students.

It has been usual to read the best historians of antiquity without any reference to the country which was the scene of events. The consequence has been, that *in general* no studies have been so little attractive and so unprofitable. To understand what is said of a country by any historical writer, we should make ourselves acquainted with its most striking geological and mineralogical phenomena; its characteristic animal and vegetable productions; its climate, soil, and mode of cultivation; and its existing ancient monuments. Let a student, after one weary perusal of the second book of Herodotus, apply himself to the 'Modern Traveller,' and he will return to the antient historian with curiosity stimulated and directed.

A small map of Egypt is prefixed to the first volume, and one of the upper streams of the Nile to the second. They are rather better than maps usually attached to small books, but not a sufficient accompaniment to the description, as many places of some importance are necessarily omitted owing to the smallness of the scale. There is also sometimes a discrepancy between the map and the description, a thing of constant occurrence in books of travels, where the map-maker and book-maker are in general two different persons.

\* The student, who has the opportunity, should examine the plates of this temple in the *Descript. de l'Egypte. Antiquités.* Vol. I. pl. 48, &c. Brit. Museum.

## EGYPT.

*Ideen über die Politik, den Verkehr, und den Handel der vornehmsten Völker der alten Welt. Ägypter.* By A. H. L. Heeren, Professor of History in the University of Göttingen. Fourth Edition, improved.

Of Professor Heeren's volumes on the polity and commerce of the chief nations of antiquity, we have selected for notice that on Egypt, for the purpose of extending some of the views presented in the examination of the 'Modern Traveller,' and adding others that will be useful for students of ancient history.

In the introduction to this new edition the author has explained the general results that have followed from Dr. Young's discovery of the phonetic, or alphabetic value, of certain marks on the monuments and inscriptions of Egypt. It is now well known that Champollion has added considerably to the number of phonetic signs, and that he has discovered several of the names mentioned in Manethon's catalogue, still existing on the temples at Thebes and other places. How much more than this has been really done,\* or is likely to be done, may be matter for dispute; but till some further progress has been made in reading Egyptian writing, the interest in the subject will be nearly confined to those who make the antiquities of Egypt their special study.

The two chapters (2nd and 4th) in this volume which treat of the political and religious systems, and the commerce of ancient Egypt, are well deserving of attention, and will form the basis of the following remarks; the long chapter (3rd) on the kingdom of Thebes and its monuments is a separate subject.

It is in the physical peculiarities of Egypt that the author seeks an explanation of the singular character of its institutions, which, considered apart from the localities to which they were attached, would be nearly unintelligible. We cannot, indeed, flatter ourselves that we yet understand the ancient history of Egypt as we could wish to do; but who can doubt that the accounts of Greek and Roman writers ought to be illustrated by a careful examination of the country? The knowledge of the actual topography and antiquities is the key to the written books, which, in their turn, will often throw light on the discoveries of modern travellers.

\* See an article in the German Journal 'Hertha,' July 1829, entitled, 'Champollion and Klaproth.'

The rapid sketch of the physical character of the country and its inhabitants contained in the first chapter, is better executed than that in the *Modern Traveller*, and is a necessary introduction to the discussions that follow.

Prof. H. hazards an opinion (p. 78), partly founded on Herodotus, and on the examination of the localities by the French, that a western arm of the Nile once ran through the *Bahr-held-md*, or *Waterless river* (included in the ancient *Nomos Nitriotes*), with which it communicated by an opening in the mountains near Memphis. Future examinations must prove if it is not more likely that a stream once ran through it from Lake Mœris, the modern *Birket el Keroun*. Heeren does not give a reference to the passage of Herodotus on which he founds this opinion; but, if it be chapter 150 of Book II. (and there is no other applicable), the obvious interpretation of the tradition there recorded is, that a stream once ran from the Lake Mœris towards the *Bahr-held-md*, and not directly from the Nile.\*

The author (p. 79) has committed an error in stating incidentally that the modern town of *Bilbeis* represents Pharbaethus, which, in fact, is north of *Bilbeis*, and has never changed its name, being still called *Pharbeit*. In some maps of Egypt, *Bilbeis* is made to correspond to Phacusa, which also is farther north, and is the modern *Tel-Fakhous*. Whatever ancient position *Bilbeis* may occupy, it does not, at least, represent either Pharbaethus or Phacusa.

The inquiry into the political history of ancient Egypt (chap. 2) comprehends the period from the earliest records to the overthrow of the throne of the Pharaohs by the Persian Cambyses, B. C. 525. It is the theory of Heeren, that the race of people to whom Egypt owed its civilization proceeded from the South towards the North, forming settlements along the banks of the river; and that each new temple thus became a centre, towards which the people, both indigenous and new-comers, would be attracted by a feeling of religion. In this way we may perhaps account for the origin of the Nomes, or divisions of Egypt, and for the difference in the religious rites which prevailed in them. For we learn from Herodotus (II. 42) that in the Theban Nome they abstained from sheep, but were allowed to kill goats: the reverse was the usage in the Nome of Mendes, which was in the Delta. Heeren considers the Nomes as originally so many independent priest states, in which the religious usages would vary with the character of the founders, and would be modified by local circumstances. If a more civilized race entered Egypt from the South, and built their temples, and

\* See Hamilton's *Remarks, Ægyptiaca*, p. 316.

introduced commerce, among a barbarous people, they must have found certain religious usages wherever they formed a settlement ; and, as it is not easy to destroy religious notions, which are always so deeply implanted, the priests (as Prof. H. conjectures) must have taken advantage of them, and have cherished them for their own interest. Beast worship was common in Egypt, and yet it varied in different Nomes ; in one place, the crocodile was treated with affection and respect ; in another he was eaten. Such usages were, probably, prior in their origin to the state system of the Egyptian priests, which would tolerate and adopt as much of the popular religions as would be found convenient or necessary. Thus each Nome retained many popular and peculiar rites, while the higher objects of worship, Osiris and Isis, received universal adoration. (Herod. II. 42.)

That the diffusion of religious systems was closely connected with commerce, is an opinion that the author frequently inculcates and enlarges on in his historical writings. The great temples, both of Egypt and other countries of antiquity, were the centres of religious devotion, and the rendezvous of commerce ; just as, at the present day, a pilgrimage to Mecca is both an act of devotion and a journey of profit. It may, perhaps, be difficult to say whether we should consider that the religious feeling has, in general, led the way to colonial establishment, and that commerce has followed—or that the love of gain has been the ruling principle, and that man has carried his religion with him, as a necessary part of his moral constitution.

It is the same in modern times as it was formerly. We who now diffuse our colonial settlements all over the earth, carry with us our religion, and give to it a fixed habitation and a permanency, by the erection of durable buildings. In the history of the early settlements on the American Continent, we find two different principles, the religious and the commercial ; sometimes one and sometimes the other predominant.

The division of castes in ancient Egypt is the most striking part of the political system. When a nation is said to be divided into castes, we mean that the whole population is distributed into certain classes which have a character or occupation that distinguishes them from one another, and which is hereditary. To pass from one caste to another is not permitted : each man has his rank determined by his birth. In such castes as those of the priests and soldiers, the distinctions are striking, and easily preserved ;

while, in the inferior castes, the line of separation is more readily passed, as the number of subdivisions may be almost infinite. Prof. Heeren traces the origin of Egyptian castes to difference of origin in the component parts of the population, and to differences in the mode of life, depending on local circumstances.

It may be suggested as a matter for the consideration of those who study the constitution of human society, whether it is *necessary* to suppose difference of national origin, in order to account for the existence of castes, even where these distinctions are most marked and unchangeable. It is easy to trace the rise in modern times, and in civilized countries, of separations among men analogous to castes : the only difference is in the duration of these modern distinctions, which cannot be permanent where the spirit of invention daily creates new objects of use and pleasure, and where the acquisition of wealth is left open to industry. But in Egypt as in Sparta\*, improvement was stopped in various branches of industry, by the son being required to adopt the trade of his father, and by all other people being excluded from competition with him. Even where no fixed political or religious obligation enforces it, we see a tendency to this among ourselves. A town of shoe-makers or glove-makers will continue to make shoes and gloves, and nothing else, till invention and change either spoil their trade, or give them a motive for engaging in a new one. According to the author, the caste system could not receive its complete developement till all the Nomes were united into one kingdom ; for, till that took place, the warrior caste could not have a peculiar and decided character. The union of the parts into one whole would be followed by the formation of a large body of soldiers.

The Greek writers, from whom we draw our information about the priest caste, only saw the shadow of their former greatness. In the time of Herodotus, foreign conquest had already degraded them, though they still retained the substantial advantages of private property, and participation in the revenues attached to the temples. Each temple possessed lands, from which it derived a rent for the support of the common table, and the maintenance of the corporation (Herod. II. 37). A steward, or bursar (*γραμματοῦς*), probably a priest, would be necessary to look after the property ; and, accordingly, we find that Herodotus had some conversation with one at Sais, who seems to have had a turn for joking (II. 28). The greatest establishments of priests were in those cities, which were once capital towns, or royal

\* See Herod. VI. 60.

residences—Thebes, Memphis, Heliopolis, and Sais. Not only were the privileges of the priests hereditary\*, (that they were allowed to marry, it is almost unnecessary to mention,) but the privileges of the *particular* families were hereditary. The sons of the priests of Memphis would succeed their fathers in the possessions attached to the temple of Hephaestus (Ptha), but could have no claims on the revenues of the temple of Heliopolis. We learn from the book of Genesis (chap. xlviij.), that all the Egyptians, except the priests, surrendered their lands to the king, in the time of the great famine. This, of course, implies, that there were once other landowners besides the priests. It is a difficult question (see Heeren, p. 141) to explain what kind of land-tenure we must suppose after this period; but it seems probable from various passages (Herod. II. 109. Diod I. 73,) which, however, are not without their discrepancies, that we must consider the priests as enjoying the complete property of their lands, and the king as the owner of all the rest. Each soldier of the warrior caste, the next in rank to the priests, had a certain quantity of land assigned to him, and other emoluments, also, when he was in attendance on the king (Herod. II. 168). The rest of the people held their lands on condition of paying annually a certain sum, or part of the produce (II. 109), but, probably they had only the possession, and not the property of the lands which they cultivated. Besides the castes of warriors and priests, Herodotus (II. 154) names the herdsmen, or cattle breeders, probably partly Nomadic; the swineherds, genuine Egyptians, but held in abomination by all the castes, and excluded from all intermarriage and connexion with them (Herod. II. 47); those who followed trade; the interpreters; and the boatmen of the Nile. The division of Diodorus (I. 64) is not the same, but the differences are unimportant in a general view of the subject. The whole of this second chapter ‘On the Political condition of ancient Egypt’ should be carefully read by students of ancient history, who will find in it a great deal of useful information, which cannot be compressed into a few pages.

The fourth chapter is on the ‘manufacture, or arts, and commerce of Egypt.’ We shall briefly mention some of the principal native products and manufactured articles which entered into ancient Egyptian economy and commerce. It is not from written books alone that we learn what proficiency the Egyptians had made in the arts; the evidence of

\* Examples of hereditary priesthood, to which property or profit was attached, may be found among the Greeks. Herod. VII. 153, III. 142.

their skill exists in those imperishable monuments also, which may be considered as their national archives. The temples of Thebes, Esneh, Denderah, and Edfou ; and the painted grottoes of Eileithyias, and Beni Hassan (*Speos Artemidos*) contain information that books do not give.

The painted reliefs in the grottoes of Eileithyias, represent all the most important occupations of daily life, agriculture, fishing, hunting, navigation on the river, and traffic in the market ; and in the tombs of Beni Hassan, the weaving of cloth, and net-making, are easily recognized\*. According to Exodus (ix. 31, 32), if all the names are correctly translated, wheat, barley, rye, and flax, were then grown in Egypt. Wheat and barley, and also flax, with the way of preparing it, may be seen on the walls of the grottoes. The fine linen of Egypt was used in the time of Joseph, and was an article of commercial exchange in the reign of King Solomon, as well as at a later period when Herodotus wrote. The Greeks exported wine to Egypt, and among other things received linen cloth in return. (Herod. III. 6. II. 105.)

Pliny says (XIX. 2.) that cotton was cultivated in Egypt, and from the passage we may infer that he thought the ancient priests of Egypt had their clothing made of it. But Pliny's evidence must never be taken without examination : he laid his hands on all books that came in his way, and often copied without reflection. Herodotus calls their garments (*λινέα*) linen, and as he has another word to signify cotton, his evidence is against the early cultivation of this plant. He calls cotton what the Germans do, baumwolle, or tree-wool, (*ειπον δέ τὸ ξύλον*, III. 47. 106), and assigns it to India as its native place. When he describes the coat of mail or quilted jacket which Amasis sent to the Lacedæmonians (III. 47), of which cotton forms a part, he speaks of it as a rare thing. If it be true, as Heeren remarks (p. 357), that the swathings of the mummies are generally cotton cloth, the question is decided ; but the few specimens that we have seen are linen. If the representation of the cotton plant could be found on the painted walls, this also would be decisive evidence in favour of the early use of cotton among the Egyptians †.

The Nile produced several water plants that formed important articles of Egyptian economy ; they are described in Herod. (II. 92), two kinds being named lilies (*χρυσέα*), and the third the Byblus.

\* See Minotoli, Pl. xxiv. 2.; Hamilton, p. 92, &c., for the interesting description of the grottoes.

† The word *βουρής*, used by Herodotus and others, is considered to mean cotton. But can this be proved satisfactorily ? See Pausanias' description of *βουρής*.

The first mentioned species (the *Nymphaea Lotus*) has a head or top, containing kernels, that were bruised and made into bread; the root too was eaten. This species is still found in great quantities about Damiat, and, according to Savary (quoted by Heeren), is still used for food. The second species (*Nelumbium Speciosum*) also produced a head full of kernels, like those of an olive, that were eatable. Both kinds are represented in the tombs \*; and the leaves and calyx are recognised as ornaments in Egyptian architecture.

But the *Byblus*, the third plant, had more extensive uses. Its root was eaten like that of the *Lotus*, while the upper part, as Herodotus remarks (II. 92), was applied to other purposes. What these were we must collect from various passages. We learn (II. 37) that the priests had shoes made of it; and that it furnished the boats of the Nile with sails and cordage. It was manufactured also into a writing material, which possessed, at least, the advantage of durability, as we find specimens of it still existing, brought from the catacombs of Thebes. That so useful a commodity would be an article of commerce we may readily imagine, and we have the testimony of Herodotus (V. 58) to its early use in Ionia. The priests also preserved on it their genealogical tables. It was from a papyrus roll that the priests of Memphis read to Herodotus the long list of their ancient kings. (II. 100.)

Pliny tells us (XIII. 11. on the authority of M. Varro) that the use of the *byblus* as a writing material was not known before the occupation of Egypt by Alexander, which piece of information is of the same character with a great deal more that is believed on Pliny's authority.

The olive was not cultivated in Egypt when Herodotus was there. For their lamps they used the oil made from the *syllicyprum* (called by the Egyptians *kiki*), the *Palma Christi*. As to the vine, though Herodotus speaks of wine being imported into Egypt, we find the representation of the vine as an architectural ornament, and also wine-making represented in the paintings of Eileithyias. The vine now grows abundantly in the *Faioum*, and probably is indigenous there.

Egypt was a great cattle-breeding country, as we may infer from there being a nomadic kind of caste that derived their distinctive appellation from this occupation; the ox also is represented on the grottoes of Eileithyias, as employed in drawing the plough.

It was from Egypt, too, that Solomon (II. Chron. chap. ix.)

\* Belzoni, Plate 2.

procured horses for his numerous cavalry. These animals often appear on the existing monuments with all their trappings and decorations \*, and with them also the mule and the ass.

The history of man is connected with that of various animals, which he has made subservient to his use and pleasure ; and among those which in Asia and Africa are the most indispensable, we must reckon the camel. It has been maintained by some critics, and the opinion has been transferred into popular works, that the camel was not used or known in Africa before the Arab conquest. Heeren's arguments and facts appear to establish the contrary. Camels were known in Egypt as early as Joseph's time, as we learn from the book of Genesis (xii. 16) ; they are distinctly represented on an obelisk at Luxor † (Thebes), though this has been denied ; and if the camel was well known in Egypt at so early a period, it is quite incredible that it was not used in the extensive African traffic ‡, of which Thebes was once a centre.

Camels would not be bred in the Delta or along the Nile, but among the nomadic tribes, between the river and the Red Sea, where the Ababdé Arabs of the present day still breed them for the market of Esné ; and we think that Professor Heeren is right in interpreting Herodotus (VII. 69, 86, 87), as indicating, by the Arabs mounted on camels, the Arabs of the regions now occupied by the Ababdé.

It is not necessary to do more in a notice of the work like the present, than to explain its general character, and to show more particularly by some specimens what is its design, and the way in which it is executed. To point out, too, to the numerous students of ancient history the various facts, instructive as well as amusing, which in ordinary education are too much neglected, is another legitimate object of such a notice. Much beyond this cannot be done, without stretching out our remarks to a most unreasonable length.

Professor Heeren has said nothing about glass, which is found on some of the mummies in the form of small beads ; and larger fragments also, generally of a blue colour, may be seen by those who are curious. Whether it was made in Egypt, or imported from Phœnicia, is a question for discussion. Some critics have supposed, and the interpretation is

\* See the *Description de l'Egypte*.

† Ibid.

‡ Heeren says (p. 365), that even if the camel were not found on the monuments, it would not be decisive against his opinion ; and he instances the ass, as an animal known to the ancient Egyptians, but not represented. Hamilton (p. 94) mentions the ass among the animals in the grottoes of Eileithyias.

a fair one, that the ear-pendents of the crocodiles, mentioned by Herodotus (II. 69), were of glass.

The present volume differs considerably from the earlier editions, and has been remodelled and improved, with the aid of the numerous works on Egypt that have from time to time made their appearance. A map of Egypt, as far as the second cataract, and a plan of Thebes, both by O. Müller, the author's friend, are inserted in the volume. The map has no further pretensions than to be an aid in making the general remarks intelligible, and is not put forth as any thing complete: for the purpose for which it is intended it is sufficiently exact. Several appendixes on matters connected with the main subject are added to this volume; and among them, one on the ancient caravan routes of Africa. This is a branch of historical inquiry which Professor Heeren seems to dwell on with pleasure; and though we willingly admit that he has in some cases pointed out commercial roads hitherto neglected by geographers and historians, it is a fact equally undoubted, that he tortures his authorities beyond all the limits of mercy, till he has extracted from them the evidence that he is determined to find.

A more signal instance cannot be quoted than his still persisting (p. 439) to make the Nasamones of Herodotus (II. 32) cross the Great Desert, and visit the banks of the river Joliba, the mis-named Niger, and the fruitful source of so many learned dissertations and blunders.

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#### NOTICE OF SOME TABLES OF DIFFERENT SPECIES FOR FACILITATING CALCULATION.

FROM the time when mathematics began to be applied to practical purposes, the utility of tables for the purpose of facilitating calculations must have been felt. We find both among the Hindoos and Greeks, attempts at the construction of such tables for trigonometrical purposes. In modern times, especially after the invention of the art of printing, the practice of making tables for reference gained ground. Various means of expediting calculation were discovered, to some of which this article will refer. The invention of logarithms turned the whole attention of mathematicians to this new discovery, and threw all other methods into the shade. Such was the comparative ease with which enormous calculations were performed by means of them, that men

seem not to have considered that other tables might still be useful, and even preferable in particular cases. Nevertheless, such is the prominent importance of logarithms, that in noticing the different works which form the subject of this article, it will be advisable to give them the first place. We proceed to a short examination of three different tables, which have lately appeared in France, England, and the United States of America.

*Bagay, Nouvelles Tables Astronomiques et Hydrographiques, &c., 4to., Paris, Firmin Didot, 1819.*

This work, which is valuable to the calculator of every description, commences with an elementary explanation of the doctrine of the sphere, accompanied by trigonometrical formulæ, examples of their application to spherical trigonometry and astronomy, and an explanation of the instruments employed in nautical astronomy. This is followed by a large collection of astronomical tables, including all which can be useful in nautical operations. Of these it is not our purpose to speak, as we shall confine ourselves to the tables of logarithms, which occupy the main body of the work. The logarithms of all numbers of four places are given to seven places of decimals, the last two being marked off by a full stop. The logarithms of numbers of five figures are also given as far as 21600. This table is less extensive than those in common use, but is amply sufficient for astronomical purposes, in which the logarithm of a number is rarely taken, except as the sine, cosine, &c. of some arc. The first column is accompanied by a characteristic, which appears useless to the proficient, and rather likely to mislead the ignorant.

A table for converting minutes into seconds, &c., is annexed. The largest part of the work consists in the logarithmic sines, cosines, tangents, and cotangents, which are given for every second, in a manner very similar to the table in Taylor's Logarithms. There is, however, one improvement; the change in the third figure of the logarithm, when it takes place in the middle of a column, is denoted by the cypher (the fourth figure) being filled up and encircled by another, leaving a white space between, which renders the place of the change remarkably conspicuous. An improvement is introduced also in the method of correcting the errata. In place of marking the correction with a pen, a separate sheet is given, in which all the squares which contain an erratum in the work are reprinted correctly. Out of this sheet the squares are to be cut and pasted over the corresponding squares in the work. Many may smile at the men-

tion of such minutiae, as they may think them ; those who are used to calculation know that these little things often constitute the difference between good and bad tables.

The whole work is well and clearly printed, and, considering the great quantity of tabular matter contained in it, is exceedingly cheap. It well deserves the advantageous report made upon it by a commission of naval officers to the French minister of the marine, by which it is accompanied.

Babbage, *Table of Logarithms, &c.*, 8vo. Stereotyped.

London. J. Mawman, 1827. Callet, *Table of Logarithms, of Sines and Tangents, &c.* 8vo. Stereotyped. Paris, Firmin Didot, 1795. Reprinted, 1827.

This work was prepared, we believe, for the use of the Irish Survey. The preface shews that the first volume, containing the logarithms of numbers, has been examined with extraordinary care, and contains the result of observations and experiments upon the best method of printing tables. This is a subject to which sufficient attention has not been given. At present the consulting of different tables is like reading books in different languages, each must be learnt by itself, so much do they differ in those arrangements, to which the eye must become accustomed before a table can be used with facility. The authority of Mr. Babbage, who has evidently paid great attention to the subject, ought to produce a uniform custom in this respect.

We annex the general rules at which he arrives, in the hope that their circulation may tend to promote this object.

1. The clearness or facility of reading does not depend on the size of the type alone, but on the proportion of the type to the interval between the lines.

2. Figures of the same, or nearly of the same height, are preferable to those on which some of the digits rise above and others fall below the line.

3. The lines dividing vertical columns should not be placed in the middle of the space between the columns, but should be nearer the preceding column.

4. When some parts of a table are to be separated from the rest more decisively than by the ordinary lines, a single dark line is much more conspicuous than two fainter lines adjacent to each other, and if necessary for further distinction, another and much darker line may be employed with success.

5. Those figures which are first sought on entering a table, ought to be so distinguished, either by position or by magnitude, as to strike the eye readily.

6. In most instances it is better to print the figures denoting the tens, the hundreds, or the thousands, although they may remain the same for several lines.

7. Whatever mode may be adopted for marking the change of the third figure, it ought to be of such a nature that if the four last figures of any logarithm be selected in the middle or in any part of a page, it shall be immediately visible without reference to any other part of the table, whether the third figure has changed or not.

8. Whenever additional information can be communicated in a table without increasing its bulk or adding much to its expence, it ought always to be given, unless it is of such a nature as to distract the attention too much from the part most frequently used.

9. The different tables in a volume ought to be distinguished from each other by the art of the printer, in such a manner that every one may, from its peculiarity, be readily distinguished in turning the pages over rapidly.

10. The impression of the figures on one page should not be reversed on the opposite.

11. The paper should not be so transparent as to permit the figures on the reverse side to appear through.

12. Coloured paper is more favourable to distinctness than white.

These maxims are practically illustrated in the tables which follow, and their truth is most apparent. The work is printed on yellow paper, which adds to the distinctness and saves the eyes from too much light. The change of the third figure is denoted by making the fourth figures to the end of the line in which the change occurs, smaller than the rest, by which all possibility of mistake is prevented. In the logarithms, which are as usual to seven places, wherever the last figure has been increased in consequence of the succeeding figure being greater than 5, a dot is placed under the last figure, which is useful when six places only are wanted.

The logarithms of sines, tangents, &c. which accompany this work, and which are a reprint, obtained from France, of the well known logarithms of Callet, though tolerably clear, present a striking contrast with the volume which we have just examined. No better proof could be desired of the truth of the maxims which we have quoted, than a comparison of the two volumes of this work. The logarithms are given to every ten seconds, which renders these tables nearly equal to Taylor's in the facility with which the logarithms of the intermediate seconds may be found. The first five

degrees are given to every second. On the whole a most valuable benefit has been conferred on calculators by the publication of these volumes, both as regards the tables themselves, and the model which the first volume furnishes for future undertakings of a similar kind. A remarkable circumstance accompanied the correction of this work. In looking over the various tables which have been published during the last century, Mr. Babbage discovered that there were certain errors which ran through them all, thereby proving that they have been copied from one another. On examining the Chinese tables, to which a high antiquity was imputed by some, the same identical errors were found.

Hassler, *Logarithmic and Trigonometric Tables, in a pocket form.* Duodecimo. New York. C. G. and H. Carvill. 1830.

If the reader should imagine that this volume is similar to the little tables of Lalande he will be greatly mistaken. It is by a reduction of the type, not of the matter, that the work is so compressed as to acquire the title of a pocket-volume. The contents will shew that these tables are in several parts more extensive than those of Hutton or Sherwin. They are as follows :—

Introduction.

Useful Numbers and Formulae.

Trigonometric Formulae.

Tables of Common Logarithms from 10,000 to 100,000.

- „ Logarithmic Sines and Tangents to every Second of the First Degree.
- „ ————— Cosines and Cotangents to every  $30''$  of the First Degree.
- „ ————— Sines, Cosines, Tangents, and Cotangents, to every  $10''$  for the Second and Third Degree.
- „ ————— Sines, Cosines, Tangents, and Cotangents, for every  $30''$ , from  $3^\circ$  to  $90^\circ$ .
- „ Natural Sines to every  $30''$  for the whole Quadrant.

The type is very small and clear, and the single figures are remarkably distinct. When the third figures change in the logarithms of numbers, the line is discontinued, and the remaining four figures are removed below so as to stand opposite to the first three figures to which they really belong. This we cannot call an improvement, as it gives the page a broken appearance, especially at the beginning of the logarithms, and interferes with the division into decades, which furnishes so much assistance to the eye in the ordinary tables. In the logarithms of sines and tangents, where this innovation is

not necessary, there is a remarkable accession of clearness owing to the equal intervals at which the blank spaces occur. As the whole is stereotyped there is no hope of seeing this inconvenience remedied in a subsequent edition, which is to be regretted, as the work is highly valuable, and its publication is an era in the history of logarithmic tables.

Of the sines and tangents, having given the table of contents, it is only necessary to remark, that the differences are those which correspond to  $10''$  instead of  $30''$ , the interval of the tables, by which some trouble is saved in supplying the intermediate seconds; in the natural sines this difference is given to one more place than could have been found from the tables themselves.

The title-pages at the heads of all the different departments of the work are printed in Latin, English, French, German, and Spanish. It would be advisable to adopt this method in all books of the same nature.

In the title-page it is asserted, that the errors of former tables have been corrected. It would have been well had the author published those which he found; their appearance would have been a guarantee for the accuracy of the work, and would have enabled others to correct their own tables.

It is gratifying to see science, both theoretical and practical, cultivated and enlarged by those who, though politically separated from us, are still in language, manners, and habits our countrymen. The present work is one out of many which prove that the impulse which is extending scientific knowledge over Europe has also produced its effects in America. The translation of the *Mécanique Céleste*, by Dr. Bowditch, of which the first volume has appeared at Boston, is a proof of the spread of a theoretical taste, while the present work would shew, if the state of America as a new country did not render the proof unnecessary, that practical application is not disregarded. Both the works which we have mentioned are necessarily of a very expensive nature, and could not have been undertaken in a country where but little encouragement was afforded to scientific pursuits.

Pre-eminently useful as are the tables of logarithms, they do not always furnish the readiest method of arriving at a result. In cases where the operations are simple, such as multiplication, division, and the extraction of the square root, and where many decimal places are not requisite, the application of logarithms is too slow. Attempts have been made to supply their place in particular instances, by facilitating the operations of arithmetic. The Germans seem to have

taken the lead in this department. We shall, as before, give short notices of two or three works which appear to us well adapted to the wants of the calculator.

**Hutton, *Table of the Products and Powers of Numbers.***

Published by order of the Commissioners of Longitude.  
Folio, London, 1781.

This work contains: 1. The products of all numbers up to  $1000 \times 100$ . By this table multiplication and division, as well as all the other operations of arithmetic, are materially facilitated, since numbers consisting of three and two figures can be multiplied together by mere inspection of the table, and more extensive multiplications may be readily performed by dividing the multiplicand and multiplier into periods of three and two figures. In this table much room is lost from want of attention to a circumstance which will be mentioned when we come to speak of Crelle's tables. All the products are written at full length, by which many needless repetitions are made. 2. The squares and cubes of all numbers as far as 10000, and the squares alone as far as the square of 25400. By means of this table, four figures of the square of any number may be found by inspection, or five figures, if the two first figures of the root are not more than 25. By using the difference, four or five more figures are obtained, as is explained in the introduction. 3. The first ten powers of all numbers up to 100, by which the formation of the same powers of higher numbers is facilitated. 4. Tables for the reduction of weights, measures, &c. This volume has been superseded by various works of greater extent published on the Continent, excepting in the table of squares and cubes, which, as far as we know, is the largest of its kind.

**Crelle, Dr. A. L., *Rechentafeln, &c.* 2 vols. 8vo. Berlin,  
1820.**

This work is an enormous multiplication table, including all products up to  $1000 \times 1000$ . A table perfectly similar in its contents appeared in Germany in 1610, under the title of 'Tabulae Arithmeticae prostaphereseos universales,' &c. which may have been the foundation of the present work. We take as an example of the arrangement, a part of the page containing the products in which 50 is a factor.

50	0	10	20	30	40	50	60	70	80	90	
..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..
8	4	54	104	154	204	254	304	354	404	454	00
9	4	54	104	154	204	254	304	354	404	454	50
11	5	55	105	155	205	255	305	355	405	455	50
12	6	56	106	156	206	256	306	356	406	456	00
..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..

Suppose it required, for example, to find the product of 50 and 612. On turning to the page headed 50, look in the column marked 60, and opposite to 12 will be found 306. These are the first three figures of the product; the remaining two, viz. 00, are in the last column, and 30600 is the product required. The two last figures are put in a column by themselves, because an alteration of the hundred's figure in one factor does not alter the units or tens of the product, and the same two figures therefore recur in the products  $50 \times 12$ ,  $50 \times 112$ ,  $50 \times 212$ , &c. It will be observed that  $50 \times 10$ ,  $50 \times 110$ , &c. is omitted, and that from 50 multiplied by 9 we go to  $50 \times 11$ , and so on. In multiplication this is no disadvantage, but in division it causes serious embarrassment. Suppose, for example, 50 being the dividend, one of the remainders is 10501. The next least product in the tables is 10450, or  $50 \times 209$ , but this being at the place where the passage is made, it is necessary to see whether  $50 \times 210$  is not less than 10501, to do which by the table the eye must find out  $50 \times 21$  and annex a cypher. The additional products would have taken very little more room, and the want of them is a serious defect in a work, which, nevertheless, will be found extremely useful.

Gruson, *Pinacothéque, ou Collection de Tables, &c.* Berlin, 1798.

The idea of these tables is rather singular. They consist of a series of numbers so placed as to indicate what quotient and remainder they give when divided by other numbers. Any number under 100, or any prime number under 400, being taken for a divisor, the quotient and

remainder of any number under ten times the divisor can be found. The following example, where the divisor is 4, will show the arrangement.

	0	1	2	3	4	5	6	7	8	9
	0	4	8	12	16	20	24	28	32	36
4	1	5	9	13	17	21	25	29	33	37
	2	6	10	14	18	22	26	30	34	38
	3	7	11	15	19	23	27	31	35	39

Here any number, under 40, being taken, must be found in the table. At the top of the vertical column in which it stands will be found the quotient; at the left extremity of its horizontal line we see the remainder. This table greatly facilitates multiplication and division, particularly the latter, in which, when the divisor is in the table, the quotient to any extent is written down out of the table without the necessity of putting down one subsidiary figure. In an Appendix are placed all the numbers less than 105,000 which are not divisible by 2, 3, or 5, with their divisors; so that when a dividend is not in the tables, division may nevertheless be performed by dividing by each of the prime factors of the dividend, which factors are found from the Appendix.

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*The Elements of Arithmetic.* By A. De Morgan, Professor of Mathematics in the University of London. London, 1830.

The study of mathematics is now generally considered to form a valuable and almost necessary part of education, not merely on account of the important results which may be deduced from it, but for the sake of the mental discipline which it supplies. It would seem a natural consequence of this general belief, that the earliest opportunity would be taken to gain at least some portion of this incidental advantage; or, at all events, that a study capable of being thus used, and rendered necessary by other considerations at an early period of education, would not be prosecuted in such a manner as to destroy, almost entirely, the collateral benefits which might result from it. This however is the case with the study of arithmetic, as usually conducted in this country. From considerations of convenience, it does generally form one of the earliest branches of education, and it may be so

conducted from its very commencement as, without any increase of labour or difficulty, to exercise exactly the same faculties, and discipline the mind exactly in the same manner, as the other branches of elementary mathematics. In general, however, these collateral benefits are entirely sacrificed by the method of instruction which is adopted, and the student only learns a set of rules by rote, and acquires a certain mechanical quickness and dexterity in performing the operations required, without gaining any notion of the simple principles on which those operations depend, and consequently without any exercise of the reasoning powers by which those principles are comprehended.

It is not difficult to assign a reason for this seeming anomaly. Facility in performing the operations of arithmetic is necessary to men in almost every rank of life; and some knowledge of arithmetic therefore forms an important part even of the lowest education. It is possible, however, to attain and communicate practical dexterity without understanding the principles of the science; and, accordingly, consideration of them is not *necessary* even for a teacher of the practical rules of arithmetic. These teachers, from the universal demand for this knowledge, must be numerous, and the great mass of them are not likely to bestow any attention upon the subject, beyond that which is absolutely requisite to enable them to give the instruction which they promise. The books of arithmetic composed by such teachers, or circulated among them, are naturally, like their oral lessons, a mere collection of rules and examples, without any notice of the principles on which they depend: yet, although thus deficient, they are found to answer their professed object, for practical facility in performing the operations of arithmetic is obtained. And nothing more has generally been sought for; partly because the importance of introducing mathematical considerations into education has not always been as generally recognized as it now is, and partly because even now it is not generally known how early they may be introduced, and how completely, and with how much benefit to the prosecution of the science itself, even the earliest stages of arithmetic admit them. To men of science this has been familiar, but they have not always been in the habit of applying their acquirements to the service of the unlearned. Indeed the very circumstance which ought to have pointed out to them the expedience of conducting this elementary study in a philosophical manner, the identity, namely, of the reasonings involved in it with those familiar to themselves in a more advanced stage of science, may in some cases have

hindered them from introducing such an improvement, from a notion that a mathematician acquired all the principles of arithmetic as particular applications of the more general principles of algebra, and that to all others, nothing but the practical use of arithmetical rules was of value.

It is however to those who are unlikely to prosecute a scientific education, that the earliest introduction to mathematical reasoning is most important, for it is probably the only one which they can have: and to them therefore, even more than to others, Professor De Morgan's treatise will be a very valuable acquisition, as furnishing them, while they acquire necessary knowledge (for the treatise is purely elementary in its character), with the means of exercising their faculties exactly in the same way, and with the same kind of profit, as they would in more advanced mathematical investigations. It is of importance that the opportunity thus afforded should be generally known; and it is therefore to be regretted that the author has himself rather understated the degree in which his work is capable of supplying the advantages in question.

'In order to avoid the generalities of algebraic language, which the mind of a beginner cannot grasp, it is necessary to confine each demonstration to one particular case; that is, to show, on some particular numbers, those truths which, in algebra, are asserted of all at once, by means of letters employed to stand for numbers. From the case which is chosen, a rule is drawn, which is assumed to hold good always. This reasoning is not strictly logical; but it must be recollect ed, that the student has it in his power to convince himself of the universal truth of what is stated, by employing different numbers from those used in the text, in every demonstration. This is what I recommend him to do: if he omits this exercise, he does not give the subject a fair trial.' Preface, pp. iii. iv.

In a large proportion of instances, the correctness of the reasoning adopted admits of proof without recurring to the numerous experiments thus recommended; and wherever any other proof can be given, that tentative proof is not the best. The true proof consists in showing that the reasoning is entirely independent of the particular numbers employed in the illustration: if so, the result is a necessary truth; if not, it is merely accidentally true, or, at least, the learner is not warranted in concluding it to be otherwise. For instance (we quote from Art. 77), 'If one quantity measures two others, it measures their sum and difference. Thus 7 measures 21 and 56. It therefore measures  $56+21$  and  $56-21$ , or 77 and 35. This is only another way of saying what was said in (61).' On reference to the first part of the article

(61) cited, we find this to be a *necessary* truth, depending on the manner in which these numbers are formed. The truth, indeed, is rather implied in the example given, than distinctly stated or demonstrated ; but still it may easily be deduced from considering it. On the other hand, the latter part of the same article furnishes an instance, that it is not necessary that a number measuring the sum, should also measure the parts of which it is composed. Thus, although if 77 be divided, as before, into 56 and 21, or into 49 and 28, &c., each of these parts, as well as the number 77 itself, will be measured by 7, this is a merely *accidental* truth ; if the parts taken were 57 and 20, 55 and 22, 54 and 23, &c., it would not hold good.

The distinction is a very plain one ; but it is of great importance, and should be more prominently stated than it is in Professor DeMorgan's treatise. If it is attended to, in most cases the reasoning by which the general rule is established is 'strictly logical' just as much so as in any demonstration of geometry, where the proof is conducted by reference to a particular figure, but the reasoning is quite independent of the particular proportions of the lines or angles contained in it. Thus the rule for *borrowing*, as it is called, in the case of subtraction (which is explained with remarkable clearness in Art. 35, 36), is deduced strictly from the general principle that 'the difference of two numbers is not altered by adding a number to the first, if you add the same number to the second :' the example, by means of which it is deduced, is of no use whatever in the proof, except by giving instances of the necessity and manner of applying the principle, and it is perfectly clear that the principle does not at all depend on the particular numbers used, but applies wherever a figure in the subtrahend exceeds the corresponding one in the number from which the subtraction is to be made. Again, the proof (in Art. 43) that the product of the first of two figures by the second is equal to the product of the second by the first, does not at all depend on the particular figures, 6 and 7, used in the statement of it, but follows necessarily, in the manner in which the demonstration is conducted, from the consideration that in whatever order you reckon the same collection of objects, so that in all cases you reckon them all, and do not reckon any of them more than once, the number must be found the same. The demonstration of the rule for finding the greatest common measure (Art. 79 to 82) is another remarkable instance of a general proof conducted by a reference to a particular example ; and it would be easy to multiply them : but it is unnecessary, as the objection made does not gene-

rally apply to the manner in which the rules are deduced in the body of the treatise, but only to that in which they are spoken of in the preface. In at least one instance, however, the real generality of the proof does not sufficiently appear in the demonstration. The number of decimal places in the product of two decimals is necessarily equal to the sum of the numbers of decimals in the multiplicand and multiplier, for the product is that of two fractions whose denominators are decimal numbers, and the product of two decimal numbers has as many ciphers as are contained in the two numbers themselves. This reasoning is evidently independent of any particular instance : but the manner in which the rule is deduced in Art. 121, 122, and the distinction made between the case where the figures in the product are at least as many as the decimal places in the multiplier and multiplicand, and the case where they are fewer, has some tendency to conceal the generality of the principle.

It is not, however, on a particular expression in the preface that the utility of the work itself will depend ; and its general execution is exceedingly well adapted to its object. The most important part, perhaps, of the whole subject, as being that on which the whole is grounded, and on which the advantage of modern over ancient arithmetic depends, is the doctrine of numeration, or the meaning and reason of the different values which figures assume according to the places in which they are found. The difficulty of the subject is considerable ; and it is the more formidable as the learner has to encounter it on the very threshold. It is here treated with singular clearness, and we should, perhaps, refer the reader to this part of the treatise, and to the section on decimal fractions, as the most interesting parts of the work. The whole, however, forms an admirable manual, though not free from some objections of detail.

A large proportion of these seem to have arisen from the wish of compressing the work within a small compass. For this purpose omissions have sometimes been made, which, though there is seldom any real difficulty in supplying them, it would have been better not to have left for the teacher or learner to discover. It should never be forgotten, that a work of this kind is intended for beginners, and that it will often happen that the persons who assist them in their attempts are themselves either imperfectly, or not at all acquainted with the principles of the science, and not very expert even in its practice.

An instance of this kind of omission is to be found in Art. 17, where the *rules* of numeration are given. Rules are

given for adding ciphers at the end of a number in such cases as fifty or seven hundred ; but none for inserting them in the middle in the case of such a number as four thousand and six. It is true that in the earlier part of the section, where the *principles* of numeration are explained, such a number is taken as an example, and that a learner, who fully understood what he had there read, would have no difficulty in writing it down correctly. Still in the recapitulation of the rules established this ought not to have been omitted ; it is required in two of the examples given, and the want of it is further exemplified at the bottom of page 19, where the omitted rule is introduced in a parenthesis, being wanted for actual application.

Again, the algebraic signs for addition, subtraction, &c. are used in this treatise ; which is very desirable. But the interpretation of them is not sufficiently explained, for there is no statement of the manner in which they are to be understood when used in connexion with each other, and this is of essential importance. The evil indeed is less than it might seem, for the earliest examples in which they thus occur are connected with solutions fully detailed in words, and an intelligent reader may therefore collect from them a rule of interpretation. On the other hand, a learner may very probably omit to draw the inference, and if he does so, he will be at a loss to know whether such an example as  $123 \times 9 + 4$  (Art. 51) means  $1107 + 4$ , or  $123 \times 13$ .

Besides these omissions, which to a certain degree affect the completeness of what is to be found in the book, there is no notice at all of some matters, which many readers would expect to find there. We do not speak of many of the rules of mercantile arithmetic, which, generally, are merely the application of the general principles deduced in this treatise to the practice and the subjects of particular trades, for all such applications are well left to be acquired by those who want them, at the time when they do so : we refer to matters either illustrative of the principles themselves, or else furnishing rules of general practical application, dependent on other principles besides those explained in the treatise. Thus there is no notice of any method of finding the greatest common measure of three or more numbers, of finding by one operation the least common multiple of several numbers, of the rule for increasing the last figure of an approximate decimal by 1, when the figure next after it would be 5 or upwards, no rule for finding the square or cube root, no notice of circulating decimals. The last is perhaps beneficially omitted, for no practically important conclusions depend

upon it : it might however be worth while to point out the fact, that as soon as the same remainder recurs after all the figures of the dividend, except ciphers, are exhausted, the further quotient will consist of mere repetitions of the same figure or period of figures ; for the knowledge that it will do so may occasionally save the reader some tediousness of operation. All the other omissions noticed might, we think, be supplied with advantage, with the single exception of the rule for the extraction of the cube root, the labour of which very far exceeds its utility. The rest, with the exception of the extraction of the square root, would add little either to the bulk or difficulty of the volume : and the extraction of the square root is not so unfrequently required, but that the treatise seems practically imperfect without it.

Nothing, except the actual correctness of the statements contained in an elementary treatise, is of more importance than the order in which they succeed each other. With one slight exception, there is no room for complaint on this account, as far as the arrangement of the *propositions* of the treatise is concerned. That exception is in Art. 28, where the learner is directed to exercise himself in subtracting numbers less than 9 from numbers greater, as well as in adding them together ; and this before any account is given of the principles of subtraction. Several of the *examples* however are prematurely introduced. The last example of Art. 70, and the two last of Art. 145, though they may easily be reduced to mere applications of the rules to which they are appended, are really questions in the Rule of Three, which is not explained till Art. 151.

Others of the examples introduce considerations foreign to the mere exemplification of the rule which they are designed to illustrate. Thus, in the last examples of Art. 38, 102, 105, 155, and 166, the first example of Art. 150, and the third of Art. 155, the real elements of the calculation have to be extracted from questions of some intricacy in the mode of statement. It is very right that such examples should be given, for the process of reducing the problem given to the question on which its solution depends, exercises the powers of the mind in a very useful manner : but it requires some notice and explanation, and this it does not receive. One or two examples of the kind worked in detail, would furnish all the assistance requisite ; a general direction would be given to the efforts of the learner, while the mode of treating each particular case successfully would be beneficially left to his own ingenuity and diligence.

There is a deficiency, however, which ought not, we think,

to exist with respect to any of the examples to which it applies, and least of all to such as we have last mentioned ; the want of answers. Their insertion may occasionally give a mischievous assistance to an intelligent but careless student ; but the want of them deprives every learner of the best test of the correctness of his operations. There are also a few examples in the treatise, which ought not only to have answers but solutions, for they involve principles or establish rules of some importance, which are not elsewhere asserted or proved. See Art. 19, iii. iv. and Art. 38, iii.

Many of the examples given are particular instances of algebraical formulæ, as,

$$\begin{aligned} a^3 - b^3 &= (a + b)(a - b), \\ (a + b)^3 &= a^3 + 3 a^2 b + 3 a b^2 + b^3, \\ \frac{a^3 \pm b^3}{a \pm b} &= a^2 \mp a b + b^2, \end{aligned}$$

and the like. This is an easy and rapid mode of making examples, but we do not think it an eligible one. Examples thus formed are instances of a general truth, depending on a principle to which the reader is not introduced ; but the evident connexion between the two sides of the equation is not likely altogether to escape his notice, and may entice him to a hasty, and probably erroneous, attempt to generalize in it. It is very desirable to keep the provinces of general and particular truth distinct ; and this mode of inventing examples has some tendency to confuse them.

There is one very important drawback to the utility of the work which yet remains to be mentioned, the great inaccuracy with which it is printed. To a person beginning a new course of study, and consequently doubtful of the accuracy of his own operations or conclusions, any typographical errors, especially when they affect a result, cause the utmost inconvenience, and this book unfortunately abounds in them. There is a table of *errata* consisting of eleven articles in a work of only 136 short pages, and these are not nearly all.

After entering into so much detail of the blemishes which have occurred to us in this valuable manual, we ought not to conclude without observing that they are of little importance if the book be read under the superintendence of an intelligent teacher, and that even to an unassisted student few of them are likely to oppose any serious difficulty. It is indeed one of the greatest advantages of this mode of treating the subject, that the learner, if he understands what he reads up to a certain point, is enabled to grapple with some difficulties in the sequel. Instead of merely learning a number

of rules by rote, he learns to refer every thing to reason, and he is taught how to do so ; and thus he will often be able to ascertain the meaning of an ambiguous passage, or supply the defect of an imperfect proof. It is only thus that any knowledge of the principles of arithmetic can be acquired ; and although it is not necessary to resort to these considerations to attain practical facility in performing arithmetical operations, we have little doubt that this will be gained quite as rapidly under instruction, such as Professor De Morgan's treatise affords, as it is from the old course of mere rules and examples, and it will certainly be gained better.

We have entered into minute criticism of Professor De Morgan's Arithmetic, and have pointed out small defects, because, as we wish the book to be used, it is important to notice even the least error that may cause any difficulty to young learners or inexperienced teachers.

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Dr. Butler's *Ancient Atlas.* 1827.

Since the time of D'Anville there has remained scarcely any room for improvement\* in the map of Gallia. The physical features of the country were already determined with considerable accuracy, and the geographer's own industry and learning were seconded by the most liberal assistance from the government. It is now seventy years since the 'Notice de la Gaule' was published : yet the schoolboy received from Dr. Butler, about the year 1815, the first cheap copy of D'Anville's maps on a reduced scale ; so long may accurate information exist for the scholar, and still be excluded from the school-room. This abridgement, however, is, not what it might have been ; the scale being reduced to less than half the linear scale of the original, it was necessary to omit a large part of the names : our complaint is, that the remainder has not been reduced with sufficient fidelity. Dr. Butler has, indeed, himself expressed a fear that, owing to the weak state of his eyes, some inaccuracies may have escaped him. It is our purpose to point out some of them.

No town in Gallia is so interesting to the historian and geographer as that of Narbo. Known even in the time of Pytheas as one of the most powerful cities in the country, it was afterwards the seat of the first Roman colony. In the time of Strabo it was, without exception, the most populous city in Gallia, and had already given name to one of the most important divisions. The ancient writers have themselves left us data sufficient to determine its precise locality ; its

\* We do not admit that Mannert has made improvements in the geography of Gaul.

modern name is a still more certain guide. Yet, in all the successive editions of Dr. Butler's map, we find Narbo close upon the sea on the eastern bank of the Herault, whereas it lay twelve miles up the river Atax or Aude, a river so completely distinct from the former, that a third, the Orb, runs into the sea between them. Moreover the names of these rivers being omitted, the confusion becomes greater. We are told, for instance, by Strabo, that there was in this quarter a considerable traffic between the Mediterranean and the Atlantic, the route of which was first the Atax, Narbo being the emporium, then a portage, corresponding perhaps in direction to the present canal of Languedoc, and lastly the Garumna. With the present map this would be altogether unintelligible. Again, in the immediate neighbourhood we see Bæterræ, *Béziers*, transferred from the Orb to the Aude. On the Atlantic coast we have an error still more singular; a few miles north of Lapurdum, or *Bayonne*, there may be seen on the coast the name Aquæ Augustæ, whilst thirty miles east of it, on the *right* bank of the Adour, is a second town, called Tarbellicæ. The very form of this last word should have put Dr. Butler upon his guard. In D'Anville's map he will see that the name Aquæ Augustæ Tarbellicæ belongs to one single town, which was the capital of an important people, the Tarbelli, whence the Bay of Biscay is sometimes called Mare Tarbellicum; and secondly, the real site will be found to correspond with *neither* of Dr Butler's positions, but to a third, the well-known town of Aqs or Dax, on the *left* bank of the Adour. An error precisely similar has occurred with Climberris, or Augusta. Auch, the capital of the department Gers, and situated on a river of that name, bore in ancient times three different titles in succession, Climberris, the Celtic, or rather Iberic name, Augusta in honour of the emperor, and finally, Ausci, from the people whose capital it was. The river Gers Dr. Butler has omitted, but otherwise, Augusta corresponds pretty well to the situation of Auch. On the other hand Climberris is transferred a distance of fifty miles to the banks of the Adour, where it constitutes an independent town. Ascending to the sources of the Garonne, we find the word Lugaunum, and fifty miles to the east of that position is Lugdunum. These, likewise, must have arisen from a common origin, viz. *Lugdunum Convenarum*. The first position will thus be correct; the second site seems to belong to Consoranni, which has been altogether omitted, though it is the capital of the district now called *Le Couserans*.

The following are errors of less magnitude, but connected

with towns worthy of attention. According to this map, Aginnum, *Agen*, chief town of the department *Lot et Garonne*, lies on the left bank of the latter river; Divona, *Cahors*, capital of the Cadurci, and still the departmental town on the left bank of the Lot; Segodunum, *Rodez*, formerly capital of the Ruteni, now chief town in the department Aveyron, on the left bank of the river so called; Argentomagus, *Argenton*, on the left bank of the Creuse; Confluentes, *Coblentz*, on the left of the Moselle. Such are the positions of these towns according to Dr. Butler. By consulting any good map the reader will find that these towns ALL lie on the right instead of the left banks of the respective rivers. In Dr. Butler's map of Germany the error, as regards Confluentes, is corrected, and that town occupies a site more consistent with its name. By comparing the course of the Rhine in these two maps other differences will appear. Thus, the situation, with regard to the river, of Mons Brisiacus (Brisacum in the map of Germany is of course an error), Fletio, Trajectum, will be found to vary in the two maps. Perhaps, however, it was intended to mark the variations that have occurred from time to time in the bed of this river. A more decided error presents itself in the site of Augusta Treverorum, *Trèves*, which is removed from the Moselle to an insignificant stream now called the *Sure*.

It may be as well to note the following errors in orthography, perhaps due to the engraver.

Viducas for Viducasses or else Viducae, near *Caen*.

Turores for Turones, district round *Tours*.

Pictavii for Pictavi, people of *Poitou*.

Corispati for Corisopiti, part of the Osismii.

Veneti for Veneli or Unelli, *La Manche*.

Venetiae for Venetiae insulae.

Augustonometum for Augustonematum, *Clermont*.

Illuro for Iluro, *Oleron*.

Antissiodurum for Autissiodurum, *Auxerre*.

Vellanodonum for Vellaunodonum, *Beaune*.

Caebillonum, for Cabillonum, *Chalons sur Saône*.

Lausontius for Lacus Lausonius, *Lausanne*.

Vosgesus for Vosegus or Vogesus, the *Vôge*.

Tarusconiensis for Tarasco, *Tarascon* in the *pays de Foix*.

The last is partly due to D'Anville, who has attached to the town what, as appears from his notice, was the appellation of the people, Tarusconienses. Dr. Butler has changed the plural to a singular. D'Anville is also responsible for the ablative Revessio, which, on the authority of Ptolemy, should be changed to the nominative Revesson, or -um.

In the Itineraries from which Revessio has been taken, little attention is paid to the termination of the cases.

In the way of omission the following may be noted.  
*Names of rivers:* Atax, *Aude*; Arauris, *Herault*; Tarnis, *Tarn*; Duranius, *Dordogne*; Carantonus, *Charente*; Olina, *Orne*; Isara or Esla, the *Oise*, whence Isarae-briva, *Pontoise*; and returning to the South: Isara, the *Isère*, and Varus, *Var*, the boundary of the country. Rivers being the best foundation for geographical knowledge, it is of some consequence to mark their names as well as their course.

*Names of important tribes omitted:* Tarbelli, Vellavi, Helvii, Nitiobriges, whose capital was the above-mentioned Aglinnum, Cavares, Tricastini, Tricassés, whose capital is now *Troyes*, Meldi, Silvanectes, Boii, Insubres. The two last are the more important, as they are the only traces in Gallia of the two great nations that migrated into Italy and elsewhere.  
*Names of mountains omitted:* Iura, Cebenna. There is no trace in the map of any mountains in the *Auvergne* or *Bretagne*.

To these lists of omissions we may add, Geneva; Decetia, *Decise*; Vapincum, *Gap*; Brigantio, *Briantion*; Darantasia, whence the *Tarentaise*; Bonna, Ara Ubiorum, Fossae Marianae, &c. It is not uncommon to find in the map a little circle denoting a town without any name affixed. There are nearly twenty such deserted symbols.

Our criticism of this map has been founded chiefly on a comparison with the work of D'Anville. From D'Anville, however, Dr. Butler has made one variation which affects the utility of the map. The names of those political divisions which are ascribed to the end of the fourth century and the reign of Diocletian, were by the French geographer judiciously banished from the map itself, appearing only in the margin. Dr. Butler has restored them. It would have been much better to have given either the divisions of Augustus, or else the more simple distribution of his predecessor, founded on the different origin, and different languages of the states.

We shall add a few remarks on Dr. Butler's maps of Greece, not comparing them with D'Anville's, as in the case of Gaul, but with the state of our knowledge in the year 1827, down to which period, as we learn from the title-page, the maps are corrected. And we shall not enter into minute criticism, which is impossible in a short notice, but merely point out some errors of considerable magnitude.

D'Anville supposed *two* places called Tiryns in the province of Argolis; he placed one where nobody can find it,

and the other in that position where alone these remarkable Cycloian walls exist. Dr. Butler has retained in his map the imaginary Tiryns, and has marked the real one by a little round circle without a name. A reference to Pausanias who wrote in the second century, or to Sir William Gell's *Argolis* (1810), would have corrected this mistake. The Island Calauria, on the coast of Argolis, has obtained some notoriety by being the place where Demosthenes died. Instead of the little islet, denoted by a point, the name ought to be given to the larger island north of it, which Dr. Butler calls Sphaeria or Hiera.

In Messenia, we find Messene and Ithome marked as two distinct towns, twenty stadia distant from one another, while, in fact, Ithome is a mountain at the foot of which Messene stood, and where its ruins still remain. We would gladly know the authority for placing on the river Painisus the town Stenyclarus, in characters as large as Sparta and larger than Argos. Coryphasium is put on the south side of the bay of Pylos instead of the north, where Thucydides puts it. (lib. iv. ch. 3. 8.) Colonis (read Colonides), a town of Messenia, is put wrong in Dr. Butler's and most other maps. It should be where Koron now stands, and Corone should be placed north of Koron near Port Petalidi. Xenophon informs us (*Anab.* v. 3. 11), that Scillus, the place of his retreat during exile, was on the road from Lacedæmon to Olympia, and twenty stadia distant from the latter position. In Dr. Butler's map, Scillus is four times that distance from Olympia. The far-famed Olympia itself is on the wrong bank of the river in Dr. Butler's map, being on the south instead of the north side: its place is occupied by Pisa, which, if it be put anywhere, should probably be transferred to the south bank of the river.

These are a few of the very *obvious* errors; if any person will compare Arcadia with the best map in use in 1827, he may add to the list.

A great number of names are incorrectly written, which, in nearly every instance, we have no hesitation in attributing to the engraver; such as Anachus (*Inachus*), Lubæa M. (*Eubæa M.*), Pogoni Pt. (*Pogon. Pt.*), Colonis (*Colonides*), Glympos (*Glyppia*), &c. A river Helisson, which appears in three different places, is written in three ways; Helisson, Helison, Elisson. Attica is on so small a scale, that much allowance should be made for the difficulty of clearly showing the relative positions of the most important places; but still there are errors that might have been easily avoided. Thria, which gave name to the Thriasian plain, is placed as

far north as Deceleia. Though its precise position is doubtful, we know it is not near Deceleia, nor yet near Marathon, where Pliny (iv. 7.) seems to fix it. Kruse puts it on the coast, south and east of Eleusis; its true position is probably a little to the north and east of Eleusis.

The little place Rhus ('Pous), which Dr. Butler places in Attica, and as far north as Oenoe, should be carried south and set down near Megara; for it was there that Pausanias saw it. (Attica, ch. 41.) Panactum, *Gypto Castro*, one of the frontier forts of Attica on the Boeotian side, is placed tolerably correctly in the map of southern Greece, yet without the usual mark (o); but as it often happens that two maps of contiguous districts contain a common portion, let us see where Panactum stands in that part of northern Greece which comprehends a part of Attica. In northern Greece it is carried over the mountains, and placed in the plain of the Asopus; a very considerable mistake, but we believe due in a great measure to the small scale of the map, and to the difference in the scale of these two maps that contain a common portion. Indeed the whole map of northern Greece is on far too small a scale to allow great accuracy. In this map of northern Greece we find Megara instead of Megaris, Oenoe for Oenoe, and no (o); Phyle, a place of some historical importance, is completely misplaced in both maps. In the north-eastern angle of Attica we find a town, Piraeus, near Oropus; but Piraeus is the name of a district of which Oropus was the chief town. (Thucyd. ii. 23.) We beg it not to be understood, that we are unable to detect more errors in the map of Attica, both of omission and commission; but what we have said is enough to show the necessity of some alteration in a school Atlas that is so extensively used. If we were to proceed to the examination of other maps, it would be easy to show many errors of a very striking kind; such as, in Egypt, the omission of Naucratis, and the placing the pyramids south instead of north of Memphis. For it must be presumed, that an ancient map is chiefly intended to explain ancient authors, and a school map especially should be adapted to explain the books usually read in schools and colleges. When a boy then is reading Herodotus (ii. 97.), who says that during the inundation period a man may sail from Naucratis past the pyramids (he means those of Jizeh) to Memphis, how can he comprehend this passage, if he looks at the map and finds the pyramids beyond Memphis?

There is one mistake of a very singular nature. D'Anville had a theory that the Lake Mæris of Herodotus was formed by

the kind of valley that lies between the Nile and Joseph's Canal ; and in his map he represented this supposed lake by a kind of parallelogram about fifty geographical miles long. This parallelogram has disappeared in Dr. Butler's map, which we consider to be in general a copy from D'Anville, and the Canal of Joseph is transformed into the Lake Mœris.

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*Lessons on Objects*, as given in a Pestalozzian School, at Cheam, Surrey. Seeley, 1830.

Perhaps in no department of education has so much improvement taken place within the last few years as in that which belongs to children. Yet among the many useful works which have lately made their appearance, it is matter of surprise that so few have been written with the view of leading young persons to observe and reflect on the properties of the objects which continually present themselves to the senses, and of necessity occupy very much of the attention during early life. Whilst it has been the fashion for ages to teach children to read, write, and *cipher*, and, too generally, to initiate them when very young in the incomprehensible mysteries of grammar in a dead language, they have been allowed to remain ignorant of the most common natural objects, or left to form their notions of them in that imperfect manner in which all ideas are conceived by the unassisted minds of children.

The book before us is the first elementary work in this country,\* we believe, which has been devoted to the explanation of *things*. It professes, indeed, to form one of a series of volumes intended to embody in lessons the principles and method of Pestalozzi. To consider the book in reference to the system which it exhibits, is not our present object ; neither is such an examination at all necessary. It possesses an individual value and importance, and it is on that account that we now notice it.

Aikin has remarked (and the sentence is appropriately used as a motto for the lessons on objects) that 'we daily call a great many things by their names, without ever inquiring into their nature and properties, so that, in reality, it is only their names, and not the things themselves, with which we are acquainted.' It is the particular purpose of this volume

\* A small work was published in Germany in 1818, by Wilhelm von Türk, entitled, 'Die Erscheinungen in der Natur' (Phenomena of Nature.) Its object is to bring before the young pupil in a familiar manner the different phenomena of nature. It presents a variety of subjects for the child's consideration, the knowledge of which is useful, and besides, admirably calculated to draw out his powers of observation. A translation of this book would be an acceptable present to parents and teachers.

of lessons, to remedy the defect in education; so justly complained of by the author of ‘Evenings at Home.’ The subject seems to be of the highest importance, and one calculated to exercise an extensive influence upon general education. We shall endeavour to explain, briefly, some of the reasons why so great a stress is here laid on the necessity and advantage of introducing lessons on objects as an essential branch of elementary instruction.

The very consideration of the age at which the business of education commences, immediately suggests two principal reasons for commencing the work, by teaching the nature and properties of things.

First, This plan is the only efficient one by which the wavering attention of children can be interested and permanently fixed. Secondly, the plan is strictly philosophical, and is well calculated to draw forth the mental powers, and gradually to bring them in their natural succession into active operation.

The mind of a child is very much under the influence of the organs of sense, and is continually drawn away from one object to another, as each successively presents itself. To fix the attention in any way at this age, for the attainment of knowledge of any kind, is a difficult task: but to tie it down to books which are uninteresting and often unmeaning, is as impossible as it is absurd. Time is lost by the teacher in his fruitless endeavours; the mind of the learner is soured; and too frequently considerable obstacles are thereby raised to the future acquisition of knowledge. The extreme activity of the perceptive faculty suggests some visible material as the stock on which we may engraft lessons in useful knowledge. The toy with which the child plays, the table at which he sits, the room in which he lives, the objects which are most about him, and which most interest him, are the most appropriate subjects of inquiry, because he is familiar with them. He already knows their qualities, some at least, and has discovered many of their uses. Any new facts connected with such objects he learns with ease and pleasure; and what he thus learns is readily remembered, and, being often found immediately useful, furnishes a motive for fresh exertion.

The plan exhibited in these lessons is also strictly philosophical, and is formed on an accurate observation of the process by which the mind acquires its ideas; the organs of sense being the channels through which they are conveyed. The mind itself possesses a certain power, by means of which it compares, judges, abstracts, and reasons, but the subject of its operations is derived from without. The objects which surround us, are so essentially necessary to the exercise of

thought, that no ideas, however apparently abstracted and intellectual, can be considered as correct or well defined, except so far as they are consistent with nature, and can be referred to the most primary notions by regular and easy gradations. This account of the origin and gradual refinement of our ideas, is so far certain and generally true, that it applies to the acquisition of knowledge at all periods of life. It is the plan which nature herself sets into operation in the dawning mind of the infant, and it is carried forward, by the voluntary efforts of the child, in the nursery and in the play-ground; and in active life it is still continued. In childhood, however, where new ideas are conceived in such rapid succession, the truth of these remarks is more particularly to be recognized. The earliest impressions are of things and the relations of things, in the most literal acceptation of the terms. The fact of the origin of our ideas, is the more apparent, from the *degree* in which they are developed, which always accords with the degree in which the objects of external nature are brought before the senses. Two young children, for instance, of the same age and abilities, will acquire very different degrees of knowledge, if they are not equally conversant with the things around them. If one of them be confined within a short space, his nursery, parent's house, and garden, and little or no pains be taken to exhibit things before him in an interesting point of view; and if the other be allowed to roam more at large, to see a greater number and variety of objects, and to have them placed before him in a very obvious manner, there can be no doubt of the result;—the latter gains much actual knowledge, while his organs of sense are sharpened, and the faculties of his mind exercised and improved; the former in his narrow sphere of observation has his knowledge confined and imperfect, and his faculties being less exercised are less developed.

The very first rudiments of knowledge are easily attainable, because the objects which first meet the attention, present certain grand and decided lines of distinction between each other, in shape, size, colour, or some other easily understood relation. But when the subjects of thought are necessarily more numerous and complex, and when they present qualities, some similar and others dissimilar, a wider observation becomes necessary to establish the truth of the judgments formed upon them, and of the reasonings formed upon those judgments. The following error of judgment is the consequence of a confined experience. A child burns his finger by touching a red-hot coal; the ideas of red and burning become strongly connected in his mind, and he dreads to

touch an orange or a red coat as much as a coal, until his parent or nurse leads him to observe that the ideas of red and burning are not inseparably, but only accidentally connected. What is necessary in chemistry, where a regular process of induction from a great number of facts must necessarily precede the correct statement of a general proposition in the science, is necessary also to the formation of a correct idea in a child's mind. The process of generalization is always going on, but every new act in the work is necessarily preceded by an induction, drawn from a large number of individual facts, and no general statement can be correct which is not strictly deduced according to this principle. The mind of a child, however disadvantageously circumstanced, *does*, from the ceaseless activity of the perceptive faculties, and by its own inquisitive disposition, obtain for itself a certain store of practical knowledge. The unassisted powers of his mind are sufficient to discover the *more obvious* relations of things ; but of those qualities which lie hidden beneath the surface, and are not immediately observable, he remains either entirely ignorant, or forms misconceived notions of their nature, because he has no directing hand to lead him to the discovery of their truth. In the course of his merely voluntary and self-conducted instruction, error mixes itself up with truth ; a confined or misdirected observation forms incorrect or ill-defined ideas, or draws wrong conclusions ; the memory fails, and imagination supplies false images, and in this manner error and prejudice fill the place of real knowledge. It is the duty of the teacher to obviate so serious an evil. The pupil must be continually admonished to look at and to examine things, and to compare them. As the judicious architect carefully provides for the firmness of his foundation, knowing well that the safety of the whole fabric depends upon the basis whereon it rests ; so the reflecting teacher will be careful to lead his pupil first to nature, and so form his mind to habits of correctness, by placing the *very objects* with which he is to be conversant all his life, under his direct observation. He thus makes *things*, and not *words*, which are the mere signs of things, the objects of the child's attention. Nature becomes his first book ; and it is a book of most interesting contents. His walks abroad, every movement around him, every thing in short which presents itself to his lively mind, furnishes a useful, and what is more, a most interesting topic of conversation. The child himself assists in the work of instruction, because he loves it ; 'tis no longer drudgery, but delight ; it is no longer a lifeless work, lagging on through a weary and uninteresting process, but it is a

living spirit which animates the child's entire mind, and leads him on to the acquisition of solid and real attainments.

It appears then to be the business of the instructor, to lead children in the earliest stage of their education, to observe with attention the objects by which they are surrounded, and to describe with accuracy the impressions which they receive from them ; and for two principal reasons : first, because the knowledge thus acquired is best adapted to their age, and most useful for the general purposes of practical life ; secondly, because by these means the powers of the mind are developed in an easy and natural way. Such is the general principle (see page 1) of the plan of instruction which the book now before us is intended to explain, and present in a practical form.

This little volume is a 'corrected and recorrected' edition of lessons actually given to children, and, therefore, possesses a value to which no book made in the closet can lay claim, being the result of actual experiment. The work consists of a number of lessons, divided into five series ; beginning with subjects the most easy and elementary, it gradually increases in difficulty, each successive step being adapted to the mind of the child as it acquires fresh stores of knowledge. Every part of these lessons is interesting to the child, both on account of the active operation into which his own mind is necessarily called by the *manner* in which the lessons are given ; and also by the attractive nature of many of the *materials* which form the subject of the lessons. In the first and most elementary series, the pupil is *simply taught* to make a right use of his organs of sense, and to exercise his judgment so far only as relates to the objects about him ; and accordingly the matter brought before him at this stage, is such that its obvious properties can be discovered and described by a child who has acquired a tolerable knowledge of his mother tongue. Throughout the whole series of lessons, but especially at the beginning, it is very desirable that the child should always *be led to observe for himself*, and not passively receive information from his teacher ; for information thus communicated is soon forgotten. In order to explain the meaning of these remarks more fully, and also to give some notion of the plan on which it is proposed that the lessons should be conducted, we select at full length the first in the series.

#### LESSON I.

##### GLASS.

Glass has been selected as the first substance to be presented to

the children, because the qualities which characterize it are quite obvious to the senses. The pupils should be arranged before a black board or slate, upon which the result of their observation should be written. The utility of having the lesson presented to the eyes of each child, with the power of thus recalling attention to what has occurred, will very soon be appreciated by the instructor.

The glass should be passed round the party to be examined by each individual \*.

**TEACHER.** What is that which I hold in my hand ?

**CHILDREN.** A piece of glass.

**TEACHER.** Can you spell the word "glass"? (The teacher then writes the word "glass" upon the slate, which is thus presented to the whole class as the subject of the lesson.) You have all examined this glass ; what do you observe ? What can you say that it is ? †

**CHILDREN.** It is bright.

**TEACHER.** (Teacher having written the word "qualities," writes under it—It is bright.) Take it in your hand, and *feel* ‡ it.

**CHILDREN.** It is cold. (Written on the board under the former quality.)

**TEACHER.** Feel it again, and compare it with the piece of sponge that is tied to your slate, and then tell me what you perceive in the glass §.

**CHILDREN.** It is smooth—it is hard.

**TEACHER.** Is there any other glass in the room ?

**CHILDREN.** Yes. The windows.

**TEACHER.** (Close the shutters.) Can you see the garden now ?

**CHILDREN.** No.

**TEACHER.** Why cannot you ?

**CHILDREN.** We cannot see through the shutters.

**TEACHER.** What can you say then of the glass ?

**CHILDREN.** We can see through it.

**TEACHER.** Can you tell me any word that will express this quality ?

**CHILDREN.** No.

**TEACHER.** I will tell you then ; pay attention, that you may recollect it. It is transparent. What shall you now understand when I tell you that a substance is transparent ?

**CHILDREN.** That you can see through it.

\* By this means each individual in the class is called upon to exercise his own powers on the object presented ; the subsequent questions of the teacher tend only to draw out the ideas of the children, and to correct them if wrong.'

† This question is put instead of asking, "What are its qualities?" because the children would not yet, in all probability, understand the meaning of the term, but by its frequent application to the answers to this question, they will shortly become familiarized with it.'

‡ The art of the teacher is to put such questions as may lead successively to the exercise of the different senses.'

§ The object of the teacher here is to lead the pupil to the observation of the quality *smooth*, and he does so by making him contrast it with the *opposite* quality in another substance ; a mode of suggestion, of which frequent use may be made.'

TEACHER. You are right. Try and recollect something that is transparent.

CHILDREN. Water.

TEACHER. If I were to let this glass fall or you were to throw a ball at the window, what would be the consequence?

CHILDREN. The glass would be broken. It is brittle.

TEACHER. Could I in the same manner break the shutter?

CHILDREN. No.

TEACHER. Could I break it if I used great force?

CHILDREN. Yes.

TEACHER. Would you therefore call the wood brittle?

CHILDREN. No.

TEACHER. What substances then do you call brittle?

CHILDREN. Those which are *easily* broken.

These are probably as many qualities as would occur to children at their first attempt, which being arranged on the slate form an exercise in spelling. They should then be effaced, and if the pupils are able to write they may endeavour to remember the lesson, and put it down on their slates.'

It will be observed from this lesson, that the chief business of the teacher is to draw out the ideas of the children, and to direct them in a right channel. He must likewise continually bear in mind, that the knowledge of a *term* should follow the conception of the *idea* which it expresses; and he should never give a word or expression to a child, till the young learner feels the want of a term to express some quality or thing which has been fully comprehended.

The second series consists of a number of lessons, calculated to fix in the mind the knowledge already gained by the previous series, and to bring the powers of judgment and comparison into more active operation. It is here very properly recommended, that the child should be led to classify the various qualities of objects, according to the organs by aid of which they are conceived: a list of the lessons of this series is here given, and one is transcribed in full.

**LESSON I. A Pin.**

II. A Cube of Wood.

III. An uncut Lead Pencil.

IV. A Pen.

V. A Wax Candle.

VI. A Chair.

VII. A Book.

**LESSON VIII. An Egg.**

IX. A Thimble.

X. A Penknife.

XI. A Key.

XII. A Cup.

XIII. A Grain of Coffee.

XIV. A Pair of Scissors.

**LESSON VIII.**

**AN EGG.**

*Parts.*

The shell.  
skin.

*Qualities.*

It is oval.  
white.

<i>Parts.</i>	<i>Qualities.</i>
The white.	It is hard.
yolk.	edible.
interior.	nutritious.
exterior.	opaque.
surface.	dull.
embryo, or future chicken.	shell is brittle. smooth. thin.
	The white is liquid when raw. solid when boiled. semi-transparent. adhesive. sticky. insipid.
	<b>Yolk is yellow.</b> liquid. soft. opaque. odorous. sapid.'

In the third series the teacher, who has now firmly grounded his pupils in the elements of sensible knowledge, and has in some degree habituated them to careful and constant observation, leads them to exercise their judgment in its more complex operations. He no longer confines their attention merely to the external and most obvious qualities of things, but he teaches them to penetrate deeper into them, and to consider their structure, varieties, and combinations. The objects here presented before the children are such as consist of many parts, each possessing many qualities, nicely distinguished from one another; or else they are things that exist in different states and fulfil accordingly different offices. The differences between such things as wool and woollen-cloth; between cotton, cotton-thread, and cotton-cloth, white or coloured, and between a pen and a quill, may be presented to the pupil at this stage of his progress.

After having gone through a regular course of instruction, such as the above, children generally possess a power of observation and discrimination, which may easily be applied to any object which presents itself. They view things with a different eye from what they did before; they are always actively looking about them, and they detect qualities and relations before unobserved. The children must now be exercised in arranging and classifying objects, connecting things by their points of resemblance, and at the same time individually distinguishing them by their points of dissimilarity. This work of classification becomes actually

necessary to the retaining of ideas after a certain degree of knowledge has been acquired. A large number of individual, unconnected ideas cannot be remembered, but when linked together by some true principle of association they are easily and pleasingly recalled at will. With this view, in the fourth series the spices, among other things, are chosen, as exhibiting a connected series of objects, forming a good ground for proper arrangement and classification. The senses are in this series likewise brought under more careful consideration; the lesson on cloves may be considered a fair specimen of the lessons in the fourth series. When a child has been found competent to understand pretty well the lessons of the first four series, and has acquired an ability of generalizing correctly, and of arranging and classifying objects into proper groups, he may now be considered competent to enter on the exercises of the last series. These are of a nature more complex, and requiring a greater exercise of thought. Articles of domestic manufacture, articles of domestic use, natural and artificial productions, metals, earths, any thing, in short, may be presented to the pupil in a more scientific point of view than before. The children are required to make what observations they can upon the objects before them, and the teacher adds to their stock of information any further particulars which seem best calculated to amuse or instruct them. The teacher, in conclusion, sums up all the knowledge that has been gained. An examination ensues, and at the conclusion, the children are required carefully to note down the results in writing. Throughout the whole of these lessons, it is the intention of the author that opportunities should be continually given for exercise in composition. In the earlier lessons, the pupils are required to write down the names of parts and qualities, merely for the purpose of habituating them to the right spelling of words and the understanding of their real meaning. In the more advanced lessons, however, of the fourth and last series, considerable exercise is given in *composition*; and thus these lessons have a value in them superior to that which might be acknowledged by a superficial observer. They lead not only to the correct formation, combination, and classification of ideas, but also to an accurate description of them in written language. The following is a specimen of one of the lessons of the fifth series.

#### ' LESSON XV.

##### PARCHMENT.

Parchment is the skin of sheep or goats, prepared in the following manner. The wool is stripped off the skin, which is then taken to the lime-pit; after this it is stretched as tight as a drum

upon a frame, and the remaining flesh pared off with a keen-edged instrument ; a kind of white stone or chalk reduced to a fine powder is then spread upon the surface ; and a large pumice stone flat at bottom is rubbed over it, which scours off the remainder of the flesh. The knife is once more applied to the skin, which is moistened and rubbed again with the pumice stone, until the inner side is smooth. The outside then undergoes a similar operation. It is now left to dry, and afterwards is taken off the frame, and given to the parchment maker. He first scrapes it dry on an instrument called a summer (which is a calf's skin well stretched on a fraine), with a sharp iron tool, until one half of the thickness of the skin is pared off ; the pumice stone is next passed over it on both sides, till it is rendered quite smooth.

'Parchment was in use long before the invention of paper. Wills, and other documents, intended to be preserved for any length of time, are written on it. It is also used for drums.'

With respect to the general plan of the book it appears good, and the gradations from the more simple to the complex and difficult subjects are easy and obvious. It is, however, matter of regret that the principle of arrangement and classification has not been more strictly followed throughout the work. We are not aware whether the want of order of which we complain, is the effect of oversight, or purposely allowed to remain, from the fear of restricting the liberty which is necessary to the free developement of the children's thoughts. To us, indeed, the observation of order in an elementary work seems to be important not only on account of its absolute necessity for the acquisition of knowledge, but because the *habit* of arrangement is of such inestimable value, that the practice of it cannot be begun at too early an age. Occasional erroneous statements might, without difficulty, be pointed out in the book, but we believe that they are not very numerous or important, at least, not enough so to render the book an unsafe guide. Instructors of youth, however, should always bear in mind that some evil necessarily results from the formation of even a single incorrect notion. Frequently a hard and Latinized word is used when a common one would answer the purpose better ; for example, *eatable*, *curdled*, *lengthways*, are better words than *edible*, *coagulated*, and *longitudinally*, in a book of this kind.

The principles on which these lessons are founded may be applied to other, and also to more advanced, stages of education. In the study of pure mathematics the fabric of science rests on no other foundation ; a child will only form correct ideas of numbers, magnitude, and figure, as he has been led by easy steps to separate them by a process of abstraction from the subject to which they invariably belong in nature. The learning of a language, particularly the

Latin, Greek, or German, which are so admirably adapted for the purposes of classification, ought to be conducted on the same principles : the words are the materials ; these materials possess striking points of resemblance, by which we are helped to form them into groups possessing some common character ; and then we can examine with more ease wherein the various words of each group differ, and thus we are led to more minute and exact classification. We consider these principles to be of the utmost importance in the formation of the thinking faculty ; they open the mind at an early age and prepare it for the acquisition of solid and really useful information.

In most systems of instruction, particularly in this country, the elementary part of education is conducted in a manner very different from that which is here recommended ; and with the exception of some popular works that fortunately both instruct and amuse, there is little in the ordinary course of teaching calculated to develop the faculties of children. There may be errors in the execution of the book which we have noticed (and it would require no small stock of varied knowledge to criticise all the details), but we believe the general principles on which these lessons are formed, to be the true basis of instruction.

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#### HEEREN'S MANUAL OF ANCIENT HISTORY.

*A Manual of Ancient History, particularly with regard to the Constitutions, the Commerce, and the Colonies of the States of Antiquity.* By A. H. L. Heeren, Professor of History in the University of Goettingen, &c. &c. Translated from the German. Oxford, Talboys, 1829. pp. 476.

This is a translation of the well-known work of Professor Heeren, entitled 'Handbuch der Geschichte der Staaten des Alterthums, mit besonderer Rücksicht auf ihre Verfassungen, ihren Handel, und ihre Colonieen.' It appears to have been made from the fifth German edition, printed at Goettingen in 1828, which we have compared with the Oxford version. The translator, indeed, speaks of the work having passed through six large editions in Germany, and also says, that Professor Heeren is in constant correspondence with the publishers, and supplies them with his latest alterations and corrections ; but without this notice of the fact, we should not have been able to discover it. The translator says, 'As facility of reference in a work of this kind is of primary importance, marginal notes have been added, and a †

placed before every work quoted in the original German.' He means, before every work written in German which is quoted (or rather referred to) in the original. The translation is executed with general fidelity, though, of course, some errors or inaccuracies occur in so long a work; among these we may reckon the following: 'Und auch dem unkritischen Curtius fehlt es nicht an manchen eigenen nachrichten, wenn sie nur zuverlässiger wären!' which is rendered, 'And even the superficial Curtius might furnish us with abundant information, did his accounts offer higher claims to our credit.' p. 204. It ought rather to be, 'and some pieces of information are to be found only in the uncritical Curtius, if they had but more claims to our confidence.' Heeren says, 'Nur der druck von aussen verhindert es, dass die national verbindung sich nicht völlig auflöst.' In the English it is, 'Oppression from abroad alone hindered the national ties from being dissolved.' p. 37. It might be better thus: 'The pressure from without alone hindered the national union from being dissolved.' In page 87, *theilung* is translated *secession* instead of *partition*. We will close these critical, or perhaps hypercritical, remarks by objecting to the words *albeit*, *civility*, used for civilization or social refinement, and *Ptolemy* for Ptolemy.

We are well aware that *albeit* was once a good word, that Dr. Johnson defended *civility* and resisted the inroads of *civilization*, excluding it from his Dictionary to the last, and that *Ptolemy* may be defended on etymological grounds; but custom, stronger than Johnson and etymology, has settled the matter, and will allow the Oxford translator no appeal; even Mr. Mitford has not prevailed on any one to copy his *sovran* or *Hebe*. The following abstract of Heeren's Manual will shew its general character, and the kind of historical and geographical information which a student may derive from it. To criticise in minute detail a work comprehending so many particulars, would require a very long and laboured examination. As we believe the work to be useful for a student as a book of reference and reminiscence, it will be some small service to notice it.

A short introduction is prefixed to the history, which is divided into five books, containing the following subjects:—

'First Book:—History of the ancient Asiatic and African states and kingdoms anterior to Cyrus, or to the rise of the Persian monarchy, about the year B. C. 560, comprising little more than insulated fragments.'

'Second Book:—History of the Persian monarchy, from B. C. 560 to 330.'

' Third Book :—History of the Grecian states, both within and without Greece Proper, until Alexander, or B. C. 336.

' Fourth Book :—History of the Macedonian monarchy, and of the kingdoms which arose out of its division, until they merged into the Roman empire.

' Fifth Book :—History of the Roman state, both as a commonwealth and as a monarchy, until its fall in the west, A. D. 476.'

The first book commences with a short but clear view of the general geography of Asia, and a few preliminary observations on the history and constitution of the great Asiatic empires. 'A nomad empire,' observes our author, 'begins merely by levying tribute and occupying some rich districts; the constitutions already established among the tributary nations being generally suffered to remain.' The next step consists in taking up a fixed abode and building cities, the customs and civilization of the conquered people being at the same time adopted; hence arises a division into provinces, and a government by satraps. The ruin of the state is then prepared by insurrections of the satraps as well as by the luxury of the rulers, and the indolence unavoidably arising from a seraglio government, and is finally accomplished by some violent blow from without. The author then gives a short sketch of the Assyrian history, remarking that 'with the Greeks Assyrian is generally a common name applied to the ruling nations about the Euphrates and Tigris previous to the time of Cyrus. With the Jews, on the contrary, it signifies a distinct nation of conquerors, and the founders of an empire.' p. 25.

After giving an outline of the history of the Medes, the Babylonian monarchy, and the states and kingdoms in Asia Minor, Professor Heeren proceeds to comment upon the fragments of Phœnician history. The account of the trade, colonies, and manufactures of Phoenicia, derived from the scanty notices found in ancient writers, is exceedingly interesting and useful, and affords a favourable specimen of the style of historical criticism which the author has adopted. A short account of the Syrians follows, and an epitome of the Jewish history, which concludes the first or Asiatic division of book i. The second division begins, according to his usual plan, with a general geographical outline of ancient Africa, and a brief sketch of the geography of Egypt. Professor Heeren divides the history of Egypt into three periods: the first of which extends from the earliest times to the Sesostridæ, that is to say, to about B. C. 1600. The second comprises the reigns of the Sesostridæ, or the brilliant period of Egypt, down to Psammetichus, 1600—650.

The third brings us from Psammetichus down to the Persian conquest, 650—525. In giving, according to his uniform plan throughout the work, the sources from which the history of the first period is derived, he observes that Herodotus having obtained his information from the Egyptian priests, ‘ it becomes necessary to inquire, what did the priests themselves know of their earlier national history? An answer to this question cannot be framed until we have ascertained in what manner the historical records of the earlier periods were preserved among the Egyptians.’ p. 52. This leads to an account of their hieroglyphics, in which Champollion and Salt are referred to, but the name of Dr. Young is omitted, who undoubtedly first discovered the phonetic value of certain hieroglyphics. Professor Heeren cannot be ignorant of this fact. The book concludes with the history of the Carthaginians.

Persian history (book ii.) is so intimately connected with Grecian, that it is of great importance to point out its sources and to appreciate them accurately. They are, 1. *Greeks.* Ctesias, of whose work, compiled from Persian annals, only a scanty extract has been preserved by Photius, Herodotus, Xenophon, Diodorus, &c. 2. *Jewish writers.* The books of Esdras, Nehemiah, and Esther. 3. ‘ The accounts of the later Persian chroniclers, Mirkhond in particular, who flourished in the thirteenth century of the Christian æra, can have no weight in the scale of criticism; they are, nevertheless, interesting, inasmuch as they bring us acquainted with the ideas that the inhabitants of the East form of their early history.’ p. 90.

Professor Heeren tells us in his preface that this book was first designed to be used in his lectures, and indeed, we still perceive in some places the brevity and generalities of a syllabus. Thus, at page 101, he says, in his account of the Persian government, ‘ Babylon, Susa, and Ecbatana, the usual residences; Persepolis now used as a royal cemetery; the court supported by the most costly productions of each province; hence arises the rigid ceremonial observed at the royal table; internal organization of the seraglio; influence of the eunuchs and queen-mothers in the government.’

The ordinary reader, who expects a book to be complete in itself, will be much disappointed by sentences like these, which seem to make researches necessary, for which he may have neither capacity nor inclination; while, perhaps, on the other hand, the diligent student will be gratified by these hints, and will often be led by them to inquiries and reflections entirely new.

The outline of Grecian geography prefixed to the third book must be judged according to the author's views in his preface. It was not his object to give any thing like a complete description, but it will still be found very useful; the reader who wishes for minute information is referred to Kruse's 'Hellas,' as far as it goes.

Heeren observes, that

'Among the moderns, the English have treated most successfully the subject of Grecian history. The principal works are:—John Gillies, the *History of Ancient Greece, its colonies and conquests*, from the earliest accounts till the division of the Macedonian empire in the east, including the history of literature, philosophy, and the fine arts, London, 1784, 2 vols. 4to.; and William Mitford, the *History of Greece*, London, 1784, 4 vols. 4to. Has been translated into German, Jena, 1800, by H. L. Eichstädt. Mitford is, perhaps, superior in the abundance and authenticity of materials\*; but he certainly is greatly surpassed by Gillies in genius and taste, and more especially in the proper conception of the spirit of antiquity.' pp. 118, 119.

To criticise the judgment here passed would require a long examination. It is enough at present to make known the opinions of the author.

The first period of Grecian history embraces the six centuries from B. C. 1800 to 1200, concluding with the Trojan war; the most important result of which was, 'the kindling of one common national spirit, a spirit which, in spite of all dissensions and feuds, was never wholly extinguished, and which necessarily ensued from an expedition made in common on so distant a field, that lasted ten years, and was crowned with such success. From the time of the Trojan war onwards, the Hellenes looked upon themselves always as constituting one people.' p. 126. The second period lasts from the Trojan war to the breaking out of the Persian war, B. C. 1200—500.

In quoting the chief laws enacted by Solon, 'a man to whom not only Athens, but the whole human race, owes a deep debt of gratitude,' p. 138, Professor Heeren speaks of 'a law enacted for the relief of debtors ( $\sigma\epsilon\pi\alpha\chi\theta\epsilon\pi\alpha$ , *nove tabulae*), not so much by cancelling the debts as by diminishing the amount by a rise in the value of money; he must of course mean a rise in the nominal value; a rise in the real value would have just the contrary effect. If Solon really

\* Heeren says, 'Wenn gleich Mitford an gelehrtsamkeit, reichthum und gründlichkeit voraussteht,' i. e. 'Although Mitford is superior in learning, copiousness, and solidity.' Perhaps, however, it is hazardous to correct the translation of a gentleman, whose publishers are in constant correspondence with Professor Heeren.

passed such a law, we think he was guilty of a very dishonest act, and that creditors in Athens would 'owe' him very little 'gratitude.'

The sketch of the Greek colonies is one of the most useful parts of the Manual. The history of the foreign settlements of the Greeks is generally neglected in ordinary instruction, and all attention is directed to Athens and Sparta. Amongst the numerous colonies many, such as Syracuse and Cyrene, rivalled or surpassed the parent states, and exercised a material influence on the political and literary character of the nation.

' Of these colonies, the most ancient, and in many respects the most important, were those along the western coast of Asia Minor, stretching from the Hellespont to the boundary of Cilicia. There, in lands with which since the Trojan war they had been brought acquainted, settled Hellenes of the three main stocks, Æolians, Ionians, and Dorians. These were the most important for trade; and here, likewise, in the native country of Homer (father of the Grecian *civility*), of Alcaeus, of Sappho, poesy, both epic and lyric, expanded her first and fairest blossoms; and hence, likewise, flowed into the mother country the elements of a moral and national character.' pp. 156, 157.

The sketch of Syracusan history (p. 168) will be very useful to a student. In referring to Mitford, Professor Heeren observes, ' The fourth volume contains the history of Syracuse, and the defence of the elder Dionysius. It would seem that even now it is difficult to write this history in a spirit of impartiality.' p. 173. The remark is perfectly correct, but will apply equally well to all parts of Mitford's history.

The following extract from the third period, extending from B. C. 500—336, will serve to show still better the objects to which the attention of classical students should be directed.

' Financial system of the Athenians.—Revenue: 1. The tribute paid by the confederates (*φόροι*), increased by Pericles from 460 to 600 talents. 2. Income from the customs (which were farmed) and from the mines at Laurium. 3. The caution money of the non-citizens \* (*μέτοικοι*). 4. The taxes on the citizens, (*εισφοραὶ*), which fell almost entirely on the rich, more particularly on the first class, the members of which were not only to bear the burden of fitting out the fleet (*τριηραρχίαι*), but were likewise to furnish the means for the public festivals and spectacles (*χορηγίαι*). The whole income of the republic at this time was estimated at 2000 talents.

\* Resident aliens are meant. The richest citizens, being always subject to the *επιφέρωσις*, were exempt from the *χορηγίαι*. Demosth. against Leptin. chap. vii. If minute criticism of Heeren's work were our present object, we should have other remarks to make on this extract.

But the disbursements made to the numerous assistants at the courts of justice—the principal means of existence with the poorer citizens, by whom the licentiousness of the democracy and the oppression of the confederates, whose causes were brought to Athens, were mainly supported—these disbursements, I say, and the expenditure for festivals and spectacles, even at this time, absorbed the greatest part of the revenue.' p. 190.

The latter part of this extract is very ill translated, to say nothing of its want of perspicuity and its inelegance. Though the present translation is useful, because it gives the general meaning of the author, it is quite impossible to say that it deserves any higher praise.

The fifth book, from p. 310—470, contains the history of Rome. It begins with an outline of the ancient geography of Italy, and a list of works on early Roman history. The following notice of Niebuhr's labours is much more likely to be unfavourable to Heeren's reputation, than to the profound inquirer who has given to Roman history a new life and a fresh interest.

'B. G. Niebuhr, *Roman History*.

'Rather criticism than history; with constant endeavours to overthrow all that heretofore has been admitted. The spirit of acuteness is not always that of truth; and men do not so lightly assent to the existence of a constitution which not only is contrary to the broad view of antiquity—inferences drawn from some insulated passages not being sufficient to overturn what is corroborated by all the others—but likewise according to the author's own avowal, stands opposed to all analogy in history. But truth gains even where the criticism is wrong; and the value of some deep researches will not for that reason be overlooked.' p. 318.

Our translator has, we know not why, passed over the following clause:—"Und die zweite, "völlig umgearbeitete" Ausgabe (von der jedoch erst der erste Theil 1827 erschienen ist); hat den obigen Tadel zugleich bestätigt und gehoben;' i. e. 'And the second edition, which has been entirely re-written (of which, however, the first part only has been published in 1827), while it confirms my censure, has made it no longer applicable.' Part of Niebuhr's history is become well known to all students by the new translation of Hare and Thirlwall, and the value of the work may now be appreciated by those who cannot read the original. We select the following short account of the Roman revenues, B. C. 130, because it is one of the merits of this Manual to direct the attention to the more useful departments of history.

'1. Tribute (*a*) from the Roman citizens, that is to say, a property-tax imposed by the senate according to the urgency of the case,

(which, however, was remitted for a long time after the war with Perseus, 168, being no longer necessary). (b) Tribute of the allies (*socii*) in Italy, which seems also to have been property-taxes, differing in different places. (c) Tribute of the provinces; in some a heavy poll-tax, in others taxes on property; in all, however, they were paid in natural productions, mostly in the ordinary, though sometimes in the more uncommon, as well for the salary of the governor as for the supply of the capital. 2. The revenue from the national domains (*ager publicus*) as well in Italy (especially in Campania) as in the provinces; the tythes (*decumae*) of which were paid by means of leases of four years, granted by the censors. 3. The revenue from the customs (*portoria*), collected in the seaports and frontier towns. 4. The revenue arising from the mines (*metalla*), particularly the Spanish silver mines, the proprietors of which were obliged to pay a duty to the state. 5. The duty upon enfranchised slaves, (*aurum viceimarium*); all receipts flowed into the national treasury, the *aerarium*; all outgoings were exclusively ordered by the senate, and the people were consulted as little with regard to them as they were respecting the imposts. The officers employed were the *quaestores*, under whom were the *scribae*, divided into *decuriae*, who, though certainly subordinate, had nevertheless a great influence. Their services, as they were not yearly changed, must have been indispensable to the *quaestores* for the time being; and the whole management of affairs, at least in detail, must have fallen into their hands.' pp. 356, 357.

At p. 407, Heeren says of Goldsmith's 'Roman History,' that it is rather a sketch than a history; and refers to p. 318, where he says that it has been superseded by Ferguson's. The fact is that Goldsmith's histories have still a great reputation among the mass of readers from the ease and beauty of his style; but he has no pretensions to be considered as an historian; indeed, there seems to be no reason for supposing that he ever consulted the original writers.

On commencing the history of the Roman state under the emperors (a period comprehending from B. C. 30 to A. D. 476), Professor Heeren gives a geographical outline of the provincial divisions of the Roman empire, and of other countries connected with it by war or commerce. Like the other geographical abstracts in this Manual, it is useful for reference; and till we get a good treatise on ancient geography in our own language, it may serve as a substitute. The work concludes with an appendix, containing the chronology of Herodotus from the time of Cyrus, drawn from the researches of M. Volney, and some genealogical tables of the Ptolemies, the Seleucidæ, the Julian family, and others.

We have already stated that our object in this notice was not so much to criticise the Manual, as to show what it contains. A careful examination of it convinces us that such a book

will be useful for our English higher schools or colleges, and will contribute to direct attention to the better and more instructive parts of history. But a much more suitable manual for young students might be made, one which would contain more historical detail and fewer general remarks.

The list of books which Heeren gives at the head of each important division loses much of its value from the want of a more exact estimate of them. Some useless books stand without any remark, and the estimate of others is apparently sometimes hastily made; useful books too are not unfrequently omitted. It is very difficult to avoid the errors which are here pointed out; but to show that we do not blame without some reason, it will be necessary to mention a few instances.

We are informed, p. 12, that 'we are indebted to D'Anville for the best charts of ancient geography.' This was true once, but it is not true now; and this may be said without any disparagement to the illustrious French geographer, who was often deficient in materials that subsequent geographers have enjoyed. In referring to Mannert, there are no strictures on his geography, which, though a valuable work, contains a great many errors.

Mr. Young's History of Athens is characterized as 'rather argumentation than history.' It does not deserve mention even for its argumentation. The judgment on Niebuhr has been already noticed.

It is surprising that Heeren, who appears to be well acquainted with what is going on in England, has not mentioned so valuable a book as Clinton's *Fasti Hellenici*. We are indebted to the translator for supplying this omission, and for occasionally adding a short notice of other books which he considers to be useful for students.

Professor Heeren informs us in a note, p. 9, that he uses D'Anville's maps, and the translator takes the opportunity of recommending the Eton Comparative Atlas as 'beautiful, convenient, and correct.' Much of this praise is justly due to the Eton Atlas; but then he adds, 'the same may be said of Dr. Butler's Ancient Atlas.' It is not within our plan to blame anything without a distinct examination; therefore we cannot at present do more than recommend a comparison between Butler's maps and the Eton, or between Butler's and any other maps of undoubted character. The map of Gaul or Greece might be selected as the test. If many differences be found, it cannot be said that both Butler's maps and others also are 'correct.'

## GREEK GRAMMAR.

*Greek Grammar; translated from the German of Philip Buttmann, by Edward Everett, Eliot Professor of Greek Literature in Harvard University.* Boston, Oliver Everett, 13, Cornhill, 1822.

*Greek Grammar; translated from the German of Philip Buttmann, Professor in the University of Berlin.* London: Richard Priestley, High Holborn, 1824.

It is not our intention to examine Buttmann's Grammar, but only to make a few remarks on the translations; and to point out some errors in them which might probably embarrass beginners.

These two translations are the same, though the titles are somewhat different. The American translation is the original, of which the English edition is unfortunately too exact a copy. It is rather singular that in the English reprint we find no notice taken of the American book; but instead of this, a studious attempt to conceal all knowledge of its existence. As a proof of this assertion, it is enough to say that various remarks in the translator's preface, and one at least\* in the body of the work, which show its transatlantic origin, are carefully omitted in the English edition; while the name Cambridge (a town in the state of Massachusetts), which stands at the end of the translator's preface, is still suffered to stay there in the reprint without any explanation.

The American translation is in many parts exceedingly inaccurate, and besides some very great errors, which will be pointed out, it is full of typographical blunders. Many of these, it is true, would cause no embarrassment to a scholar, but they will probably perplex a beginner, whose difficulties are great enough, without the additional disadvantage of a badly-printed book.

These smaller errors, which an ordinary corrector of the press would discover, are generally, but not in every instance, avoided in the English reprint: the mistakes, however, which would require a little more knowledge, and very little more, to amend, are retained in Mr. Priestley's edition.

For example, in pp. 212, 213 (both of the American and English edition) we find the following explanation of words ending in  $\sigma_{\epsilon v}$ ,  $\sigma \epsilon$ , and  $\sigma_i$ : 'Some relations of place are indicated by particles appended, and that as follows; when the question is

\* 'and partly in America,' omitted in p. 6.

whither by θεν as ἀλλοθεν some whither else.

whence — σε — ἀλλοσε from some other place.

where — θι — ἀλλοθι somewhere else.'

It might have been supposed that, by some carelessness, ἀλλοθεν and ἀλλοσε had got transposed; but the error is repeated in the next page, 'To the three relations of the place quoted, refer the three following interrogations, ποθεν, whither; ποτι, whence; ποῦ, where.' And again, p. 222, the confusion is completed by ποθεν ξεται being translated, 'where it is.'

The American translation is frequently defective in accuracy and clearness, owing apparently to the translator's imperfect knowledge of the German; but it is in the syntactical part, the most important of all for a learner, that its defects are most striking. The few examples that will be here given, out of a large number, are common both to the American translation and the English copy.

Page 223—Buttmann remarks that the *subject*, as in Latin, is commonly omitted, where it is known, of course, from the verb, or the connexion; and he adds, that it may also be in apposition with something else expressed. He is alluding to such examples as σαλπίζει, or σημαίνει, *the trumpeter gives a signal*; and as an instance of what he means 'by being in apposition with something else expressed,' he gives, δὲ Μαίας τῆς Ἀτλαντούμασι αὐτοῖς, of which we have the following translation: 'and I, the son of Maia, and daughter of Atlas, wait on them,' instead of 'I, the son of Maia, who is the daughter of Atlas, &c.' So ridiculous a mistake might have been spared in a book reprinted in England. At p. 247, Buttmann is illustrating the usages of the infinitive with the article τὸ, and he gives the following example from Thucydides: Οὐ γὰρ ἐκπέμπονται ἐπὶ τῷ δοῦλοι, ἀλλ' ἐπὶ τῷ δμοῖοι τοῖς λειπομένοις εἰναι: the translation is, 'they (colonists) are not sent out as being like slaves, but as being like those which remain behind.' The meaning is 'they are not sent out to be slaves, but on the condition of retaining equal privileges with those who stay at home.'

Page 253—λανθάνειν with a participle is explained, 1st. as denoting something that is done without being perceived by others; ταῦτα ποιήσας ἔλαθεν ὑπεκφυγών, *having done this he escaped unperceived*, which is correctly translated; 2nd., unperceived '*in respect to the subject itself*'; or rather it denotes something which the subject does not perceive till it has happened. Then follow two examples of the second usage, the first translated correctly, and the second incorrectly: ἔλαθε πεσόν, an example of the second usage, is translated,

*he fell unobserved*, contrary to the precept which had just been given.

There would be no trouble in adding to the list by examples such as, (p. 220) *αὐτὸν γὰς εἶδον*, translated, *for I saw him myself*, contrary to the precept immediately preceding; ὁ *εἰσκομιζων* (p. 217), *he who is to bring*; and other similar errors, which are calculated to give a student confused and inexact notions of some of the most important and continually recurring idioms of the Greek language.

There is one ludicrous mistake of the American translation which is corrected in the English edition, but we mention it here for the sake of the American student. In p. 229, *ἄτακτος παιδῶν* is translated, *childish in respect to male offspring*. It is almost needless to say, that 'childless' is the word that ought to be used. The kind of errors that prevail in the American translation, convinces us that 'childish' is not a mistake caused by haste and inattention.

The Greek Grammars of Buttmann possess considerable merit; and the smaller one, which we have just noticed, is probably superior to all our elementary Grammars in some respects. But the translation, in its present state, cannot be recommended, nor can it be safely used by young students. The enterprising publisher who has already done so much by his reprints of useful foreign books will, we hope, not allow a second edition of this Grammar to appear without the necessary corrections.

#### THE ANABASIS OF XENOPHON.

*The Anabasis of Xenophon: chiefly according to the text of Hutchinson. With explanatory Notes, &c., examination questions, and copious Indexes.* By F. C. Belfour, M.A. Oxon., F.R.A.S., LL.D., and late Professor of Arabic in the Greek University of Corfu. London, 1830. 1 vol. 8vo.

*Xenophon's Anabasis with explanatory Notes.* By K. W. Krüger. Berlin, 1830. 1 vol. 8vo.

THERE are few Greek books on which critics and commentators have bestowed more labour than on the *Anabasis of Xenophon*; and no one perhaps is so well deserving of their attention, if we consider the very extensive use that is made of this book in teaching the Greek language.

Dr. Belfour's edition forms one of Valpy's School and College classics, and is part of a system, of which the charac-

teristics are, to offer to the student cheap editions of classical authors, accompanied by English notes. The general principles of this system are now almost universally admitted to be calculated to facilitate the acquisition of the Greek and Latin languages. Krüger's present edition is intended for young learners; his former edition, though principally adapted for school use, being unnecessarily large, and also too expensive for many German school-boys. The short notes at the foot of the page are in German, and entirely devoted to the grammatical explanation of the Greek text. Occasionally a short passage that presents some difficulty is translated, or some general remark on the Greek syntax is made; or, what is perhaps the most useful of all, the student is referred to other passages of the *Anabasis* that serve to illustrate the syntactical usages which he meets with in his reading. This edition of the *Anabasis* is well adapted for a school book.

It requires a few more words to explain Dr. Belfour's plan, as it is less simple than Krüger's. In Dr. Belfour's preface we are informed that J. G. Schneider is the *latest* German Editor of the *Anabasis*, an assertion not quite correct, as it is very easy to name at least half a dozen German editions since that of Schneider. Those of Dindorf, Krüger, Bornemann, and Poppo are well known, and much used. Schneider 'was enabled (Dr. B. goes on to observe) chiefly by the attentive use of the Paris MS., to amend various readings,' which is certainly true: but this is a very vague way of speaking about the Paris MS.; and on referring to a note (page 27), it appears that the Editor thinks there is only *one*. He is also of opinion that Schneider rather *altered* the text than *improved* it, (which is perhaps nearly, not quite, exact,) and therefore he (the Editor) has only retained, in the present edition, those variations of Schneider from the usual text, which the principles of the Greek language and the concurrent authority of manuscripts and editions recommend. But, in general, we find no manuscript quoted either to defend an old reading, or to recommend a new one, except the Eton or *the* Paris MS.; and we shall give some instances where Dr. Belfour goes against all the good manuscripts, as he *very* frequently does, from not knowing what the manuscript variations are, of which he might have found a very fair collation in Dindorf's larger edition. A table of contents, a very useful thing for beginners, is prefixed to the Greek text: it is translated from the Latin Summary in Schneider's edition. At the end of the book there is a Greek Index, consisting of a selection from the words of Zeune's Index, which is printed in Schneider's edition, with some improvements. We are

surprised, after what the Editor has said in his preface on the advantage of using English, instead of 'spurious Latin,' that he should be contented with re-printing the Latin of Zeune's Index, instead of taking the trouble of turning it into English, as he has done with the table of contents. Some questions, 'on the Cambridge Plan,' accompanied by an Index to them, complete the description of the book, with the exception of the notes, of which we shall speak more particularly. These questions, which are at the end of the book, are but few, and we think not good as a specimen of question-making : it must be admitted however that it would not be easy to make a sample of questions that would be generally approved.

We shall first speak of Dr. Belfour's notes, as to the general plan on which they are made. To illustrate the *Anabasis* completely would require a very large volume of commentary. Major Rennel wrote a quarto book on the geography, and did not exhaust the subject. The critical notes of Krüger, Bornemann, Schneider, &c., that are worth collecting and reading, are by themselves enough to form a volume. Unless, then, an Editor, whose observations are limited by the plan of his work, choose some one department for his more particular illustration, there is danger of the whole body of commentary being nearly useless, because no one part will approach to completeness. Krüger, in his small edition, by choosing the grammatical explanation, has made a useful commentary for a young learner. Dr. Belfour has explained nothing completely, and he spends a great many words on things of no importance. His language, too, is half Latin, and as unpleasant to read as that 'spurious Latin' which he speaks of in his Preface.

In p. 181, we find that 'Porson commands ;' p. 24, 'Larcher advises from Herodotus,' which is a very fair translation of Schneider's 'Larcherus admonet ex Herodoto.' Page 27, 'imprudently Schneider ὅτεπος.' Page 176, 'Porson lauds the remark of Hemsterhusius.' These however are small matters, and we mention them not as impairing the value of the information that may be thus communicated ; but we most strongly protest against some symptoms that the Editor shows, of a wish to revive that practice of calling one another hard names, which has been the disgrace of scholars, and still is in some degree the fashion, particularly in Germany. Thus (book iv. 3, 30.) he is explaining that *ἴταιρας*, the word in his text is not from *ἴταιρα*, 'as Hutchinson, in his ignorance of accentuation, supposes ;' and then comes a little side blow against the Germans for reading *ἴταιραν*, which we shall continue to read with the Germans, as long as we read Xenophon.

Again, (i. 10, 16) he remarks, that 'Schneider, in his *ignorance* of the language,' has *παρεῖν*, where Dr. B. chooses to have *παρῆν*; the latter is, perhaps, a better reading, though the Vatican MS. has *παρεῖν*, and also Krüger. But though Schneider was not a very great verbal critic, he was still not a bad one; and when we consider all that he did for the Greek language, the word *ignorance* should never be coupled with his name. When the Editor, in a note (p. 27,) gives *μὴ τόλμου* as a specimen of Greek, we would merely remark, that he has, probably through haste, committed an error: we would not say that he did it 'in ignorance.' It is, however, a matter of serious complaint against these notes, that they do not contain good general principles for the guidance of students; and that frequently a Greek lexicographer, or critic, often not easy to be understood by a young student, is quoted, where a familiar explanation should be given. Some points of the least important kind that can be imagined, where the Editor differs from Schneider, are decided in the following manner:—In book i. 5, 11, Schneider reads *καὶ τῶν τοῦ Κλεάρχου*, where the Editor omits *τῶν*, and gives the following reason: 'Schneider has unnecessarily added a fourth *τῶν*, atque ita *νὴ Δία* depravavit tonum.' This seems to be intended for a joke.

To exhibit the text of a Greek writer as near as possible in its original form is the duty of an editor. We believe that the only mode of accomplishing this is, to procure exact collations of the MSS., to endeavour, from a careful examination, to arrange them in the order of merit, and then to follow chiefly one or two of the best, consulting the others whenever the better MSS. (which is often the case) are imperfect or inaccurate. As to corrections, we would *never* make them where the received text is supported by the better MSS., and is intelligible, and is not at variance with any established usage: where the text is unintelligible, we think there is no great advantage in foisting in an expression borrowed from the same or some other writer. But it is a different thing to make a correction, when *some* traces of this new reading are discoverable in the corrupted words, or when the general tenor of the sentence and the context clearly point out what is intended: this is real and sound criticism. The Greek lexicographers and critics of course claim some attention, whenever they have quoted a passage; but we would not rely much on their assistance, which so often has been found fallacious. Dr. B.'s way of judging of the correctness of a reading is altogether different from the doctrines here laid down: he does

not inquire what the MS. readings are ; and consequently he often makes incorrect assertions about them, or neglects them altogether. He seems to judge of them chiefly by the ear, and as his ear and Schneider's German ear evidently belong to two different classes, we cannot be surprised at finding so many notes on the subject of Schneider's 'cacophonies.'

Those who are well acquainted with the various readings of the *Anabasis* know, that in almost every sentence there are variations, many of which are quite unimportant ; but yet the Vatican MS. (called A in Dindorf's edition) and the Paris MS. (marked B) generally agree even in these unimportant variations ; and these two MSS. we should generally follow. Among this class of readings, however, Editors may pick out what they like best, without being blamed by their brethren of the trade ; but not so with that class of readings, in making a selection from which some *principle* is involved.

We shall notice a few of those very numerous cases in which we differ from Dr. Belfour. In a note on p. 4, he says, the Daric is worth 13s. : those who have weighed a Daric, know that it is heavier than a sovereign, and purer gold\*. It 'took its name from having on one side the head of Darius ;' there is no head of Darius on a Daric†.

Schneider (note 1. 2, 9,) made the number of Cyrus's Greek army to be 12,300, though Xenophon himself says it amounted to about 13,000. It might have been remarked that as Schneider left Menon's forces *out of the calculation*, and took the wrong MS. readings too, the only wonder is that he contrived to come so near the truth. The whole is explained very well in Bornemann's note. On i. 3, 11, it is remarked, that Schneider substituted ἀπιμεν for ἀπιωμεν (the Editor correctly retains ἀπιμεν) on the authority of the Eton MS. ; but three better MSS. than the Eton have ἀπιμεν also. The word μεγοῦμεν, in the same sentence (on which there is no remark), is a correction of Buttmann's, and a good one ; the MSS. have μέγωμεν. But the Editor does not keep true to his principle ; for in i. 4, 16, he has δύως ἐπαινίσοντε where Krüger and others have ἐπαινεόστε, with the best MSS., not including the Eton.

It would be unfair not to state *generally* that the Editor has in a considerable number of instances done right in rejecting Schneider's readings ; and, as a particular example, we may mention, i. 4, 12, where he takes ιόντων, instead of Schneider's ιοῦσιν. The reasons which he gives in his note for this preference would have been much strengthened, had

\* The Daric in P. Knight's collection weighs 129 gr. ; the sovereign, 123 gr.

† See Herod iv. 166, on the gold coinage of Darius.

he adopted Krüger's excellent plan of explaining one passage by means of another. For similar instances Krüger refers to ii. 4, 24, v. 2, 24.

In a note on Σηγία δὲ παντοῖα (i. 5. 2,) the Editor, omitting παντοῖα in his text, says, that 'it appears to be simply a marginal annotation.' Either παντοῖα, or παντοῖοι, a corrupted word, is found in six MSS. Though it is not the Editor's plan to notice MS. readings, we think it ought always to be done, at least, in those cases where a conjectural emendation stands in the text. In i. 5, 3, all the Editors now prefer either ἀπεσκῆτο Φεύγουσα, which is Dr. B.'s reading, or ἀπέσκα Φεύγουσα, which Krüger prefers. But the best MS. reading is, ἀπέσκα φεύγουσα, which we see no objections to receiving, notwithstanding Poppo's remarks (see his note). In i. 5, 4, Dr. B. will read ἀνιστῇ with the MS., contrary to his usual practice, though every Editor but himself clearly sees that ἀνιστῇ is intended. Krüger wishes to read ἀναστῇ, which proposition will not be generally received.

In i. 6, 1, a great improvement has been made in most editions by removing the full stop after πολεμήσας, and placing it after καταλαγεῖς δέ, as the sense evidently requires. It is rather surprising, that Bornemann keeps the old punctuation; Dr. B. also retains it. We shall now notice a couple of examples where the editor has erred, as we believe; though, in both instances, he is in very good company. In i. 6, 10, where Orontes is seized by the belt, the best MSS. have ἐλαβον, or ἐλεγον, which we believe to be intended for the same. The editors, however, read ἐλάβοντο, which, coupled with ζώνης and Ορόντην, is a solecism. Dindorf, in his larger edition, reads ἐλαβον, but in his smaller edition, ἐλάβοντο. About the second example, however, there is no doubt. Orontes is seized by the belt εἰς θάνατων, the intention to put him to death being clearly denoted by the act of seizure, and the kind of persons who laid hold of him. Then he is led εἰς θάνατον, to die, to death; θάνατον being the MS. reading, at least the reading of all the best MSS., including the Eton: and yet no Editor whom we have consulted, except Krüger, has retained the right reading. Krüger refers to Herod. iii., 14: we may also refer to the general usage of this preposition in these two senses.

Dr. B. sometimes agrees with Krüger where we should differ from both; and as, in general, it is with some distrust that we question Krüger's authority, we may be wrong in our judgment on the following point.

In i. 7, 19, the Editor prefers ἀπεγγωκέναι τοῦ μαχεῖσθαι, to ἀπεγ. τοῦ μαχεῖσθαι, recommended by the best MSS. Krüger

also has the future. The Editor says, that the present is used for an ‘act in execution, not in contemplation.’ We prefer the present, notwithstanding, as in this passage of Demosthen. (*περὶ Ποδ. ἐλευθ.*) τῷ μὲν ἀπέγνω μὴ βοηθεῖν.

An example occurs again in i. 10, 6, where the Editor has correctly preferred προσίόντος to προσίόντες, the reading of Schneider. But, in another instance, ii. 1, 1, we cannot commend his omission of τὰ before πάντα, (τὰ is found in three MSS., and among them the Vatican, which Dr. B. does not notice) nor his note: ‘Schneider has corrupted the phraseology, and destroyed the rhythm by the insertion of τὰ from the Paris MS.’ Krüger and others have τὰ, which we consider necessary; so much do the judgments and the ears of critics differ. Nor can we approve of the following punctuation (ii. 1, 3.): Προκλῆς, δὲ Τευθραῖς ἔρχων γεγονὼς, καὶ τὸ Δημαράτου τοῦ Λάκαρος. The comma should be after ἔρχων, for which it is quite unnecessary to give a reason, though the Editor has given one for his own punctuation. We will notice another instance of bad punctuation, involving a general principle, in which the Editor follows Schneider. In iii. 1, 24, he puts a full stop after ἐνθυμοῦνται, where Krüger and others have a comma. It is almost incredible how many passages are rendered nearly unintelligible by the same kind of mistake, particularly in Herodotus.

In iv. 2, 3, Dr. B. has retained the MS. reading τὰς πέτρας παίοντες, which we believe to be the right reading; Schneider’s correction of παίοντες, followed by the Editors, is quite unnecessary. But on this variation there is no note, and it is left for us to conjecture whether the Editor did not observe it, or intentionally omitted all notice of it. In looking through Dr. B.’s edition, we find many examples in which he appears to us to have restored the better reading; but we find also so many more examples of hasty and careless change and criticism, that we are quite unable to discover the general principles by which he is guided.

In the long speech of Xenophon (vii. 7, 30), Schneider has ἐκ τῶν γῦν γεγενημένων, where the Editor has ἐκ τῶν γῦν γενομένων, and the following note upon it in ‘spurious Latin,’ condemned in his preface: ‘Schneider, qui quantum sartor de usu verbi Græci scire videtur, has substituted γῦν γεγενημένων from the Eton MS.’

Among these cobblers or botchers, we find the five best MSS. (including the Eton), with Krüger, Dindorf, Poppo, and Bornemann; and we have no objection to the Editor adding ourselves to the number.

## PINNOCK'S CATECHISMS.

*Pinnock's Catechism of Geometry and the First Principles of Trigonometry.* London, Whittaker, 1829.

*Ditto, Catechism of Greek Grammar.*

THERE are two classes of persons upon whom education produces very different effects. The first, containing the smaller number, consists of those who, in learning words and facts, have reasoned upon them, and have learned to make that which they do know the means of discovering that which they do not. To these persons, words are not knowledge, but a method of receiving and communicating it. The second, and much the larger class of the two, have not penetrated beyond the surface, and have considered words only, without seizing principles, and they do not discover the inferior quality of their attainments, until put upon inquiries which demand original thought, or, which is perhaps a better test, until they are called to communicate instruction to others, and especially to the young. The individuals of this class, who understand better the meaning of one word than of two put together, place a high value on words, as all will do on their most precious possessions, be their intrinsic merit what they may.

Now it so happens, that the writing of elementary works for very young children has for the most part fallen into the hands of the latter description of persons. The reason is, that those more highly qualified too often feel a sort of disdain for so lowly an occupation, as they think it; not being aware of the difficulty of the task, and of the high order both of talent and of knowledge which it demands. They do not reflect on the clearness of perception which it is necessary to have, in order to put facts in such a shape as to make those reason to whom the employment is new. This clearness of perception is the consequence of a certain habit of considering the elements, in which deeply learned men are sometimes as deficient as the most ignorant. It is not what has been gained, but how has it been gained, what habits of mind have been formed in the acquisition, which distinguishes the man who is fit to teach, from him who is not.

This being the case, a great proportion of elementary works for young children have been put into that form in which words may be gained without the trouble of thinking about their meaning. Learning by heart that which is put before them is the principal occupation of young people, and as the making one set of phrases suggest another to the memory, is easier

than forming one idea out of others in the mind, the catechetical form has often been preferred to all others. This is the case in the little work before us, which purports to be a Catechism of Geometry, but which ought to be called ‘an ill-arranged summary of geometrical terms, without reasonings or principles, or food for thought of any description worth having ; containing a copious collection of terms out of use or misapplied, and the manner of working some problems, particularly how to draw a straight line with a pencil and ruler ; with a chapter on trigonometry, in which great care is taken to confound definitions and principles : the whole repeated at the end of the work in an alphabetical form, &c.’ In the days of long title-pages, such should have been the description of the work. The only thing which has been made more clear to us by its perusal is a principle which is stated as a self-evident truth among the axioms, viz. that ‘from nothing, nothing can arise.’ We proceed to verify these assertions by an examination of the work.

Terms which are completely out of date, if indeed some of them were ever used, are plentifully supplied. We have Lineametry, Planimetry, Stereometry; central point, instead of centre ; secant point, for point of intersection ; occult line, for dotted line ; subtense ; angle point, for angular point ; curvilinear and mixtilineal angle, trigon, tetragon, quadrangle, decagon, *et hoc genus omne*, rhomboid, trapezoid, and *posed*, for placed. Some of these are wrongly defined, from attention to their etymology, instead of their received meaning ; as for example, where it is said that ‘a figure of four sides is called a tetragon or a quadrangle,’ both these terms being seldom applied except to squares. Also a line is said ‘to touch a polygon when it passes through a vertex and is exterior to the figure.’

Many of the expressions are unintelligible to children, such as ‘extension and magnitude in general ;’ ‘a line is a space only in length ;’ ‘a point in geometry of mathematics is ideal, indivisible, and invisible, and is made a datum from which geometrical figures may be more readily worked ;’ ‘a finite line is that which is supposed to contain a necessary length.’ Again, triangles are said to be ‘subdivided according to the relation of their sides and angles.’

Undefined and difficult terms are frequently used in defining others. Among these we find plane, datum, angle, proportion, disposition, demonstration, produced, &c. From many expressions false inferences would be drawn ; others would make nonsense in reading them, did not the figures correct the obvious meaning of the words. Thus it is said that geometry was *first* cultivated in Egypt, ‘and the *most early* cultivators

of this science were Thales, Pythagoras, Plato, and Euclid : it follows, then, that Thales, &c., were Egyptians, if there be any force in logic. Also the word circle and circumference are mentioned as synonymous terms. ‘ An infinite line is that which is undetermined, having no precise length.’ ‘ A horizontal line is that which is in a *contrary* direction to a *perpendicular*.’ Here perpendicular means vertical, and contrary means perpendicular. ‘ A curve line is that which *turns out of its way by one or more deviations* :’ ‘ a straight line is that which *lies between its points* :’ ‘ a mixed line is that which is *both straight and a curve* :’ ‘ parallel lines are those which *follow one another at an equal distance* :’ ‘ a concentric figure is that which has the *same centre* :’ ‘ a right angle is *equal* to one fourth of a circle.’

The following is instanced as a principle of trigonometry : ‘ a triangle is equilateral, isosceles, or scalene, according as its three angles are all equal, or only two of them are equal, or all three unequal.’ As if definitions of useless words had not been sufficiently forced upon the pupil, the old words are repeated with omissions and additions at the end of the book. Among them, we find the terms apparent, catenary, cyclograph, gibbous, longimetry, octometer, perambulator, planisphere, polygram, theodolite, and transformation ; and these are considered sufficiently elementary matter for a catechism of geometry of five inches by three and a half, sixty-eight pages, large print, interspersed with figures half a page long. Were it worth while, some objection might be raised to almost every question in the book. It may be asked why we trouble ourselves to review what we think so full of faults, without any redeeming quality. The answer is, that the work being one of a series, published by a most respectable publisher, got up in a very neat form, and continually advertised, may be presumed to have considerable circulation, which we honestly confess it is our desire to give solid reasons for reducing. The subject is usually considered difficult, and a catechism being always an inviting object for parents who know nothing of a science, one on this subject is particularly likely to tempt them. But we would caution them to ask themselves one question before putting this manual of bad phraseology into the hands of their children ; do they desire them to get wisdom and understanding, or words and phrases ? Will learning by heart conventional terms, form habits of reflection ? If so, heraldry is the science for children, for it consists of nothing else.

We shall only notice one more of these catechisms, a Greek Grammar. The title of it is ‘ Catechism of the Greek Accidence, adapted to the most approved Grammars ; second

edition ;' it is in fact the Eton Grammar turned into question and answer. Now the value of the catechetical system seems to us, not to depend on a *particular set* of questions (unless a set of questions should be made as a kind of direction to young teachers), but on the *mode* in which the teacher puts the question, for the purpose of presenting the matter of every lesson in a new and clearer form. Elementary principles should never be taught in any department of knowledge by asking a question, the nature and extent of which the learner cannot judge of, and then making him commit to memory the answer, which is equally unintelligible. Whatever objections there may be to a grammar like the Eton, they apply much more strongly to Mr. Pinnock's, except that it has the advantage of being in English.

The Grammar is called a 'Catechism of the Greek Accident,' but it ends abruptly with δηλ-οομένου,-ουμένου, the participle of one of the contracted verbs, altogether omitting the verbs in μι, such as διδωμι, &c. The only verb in μι that is given is ειμι, *I am*, under which we find the future participle ἔσθμενος translated, *about being*. As the Grammar really does contain many of the facts found in the 'most approved grammars,' we can on this head only blame it for omissions, such as the verbs in μι, a very considerable one, however, and for the *manner* in which grammatical knowledge is presented. But there are some novelties. In pp. 4 and 5, the student is informed what is the mode of pronouncing the Greek letters by the modern Greeks, after he has been instructed that the English pronounce them in general as they do the corresponding letters in their own language. In a Grammar of seventy-two *very* little pages, which omits the verbs in μι, we think that a *whole* page on the modern pronunciation of Greek, to be committed to memory, or even to be read, is a very gross absurdity.

The Grammar, in the declension part, omits nouns of the form λεως, Α' Σως : the adjective εὐγεως, however, is declined at p. 32.—The following extract contains a little novelty, and is a fair specimen of the manner of the book. 'Q. How are adjectives of the third sort declined ?—A. Adjectives of the third sort, being of the masculine and feminine gender, and having but one termination, are regularly declined after the third declension of substantives.—Q. Can you give a few examples ?—A. Yes : Ἀρπαξ, Rapacious, &c. &c., ἐπιθυμήθης, covetous.—Q. Have not these the neuter ?—A. No, &c. &c.' This word, ἐπιθυμήθης, which we suppose to be intended, is explained in a new way, and one equally applicable to δικαιοήθης, and other words like it.

We do not make any remarks on the number of non-existing words in this book, such as *þēw, I speak, ȝēw, I put, φðāw, I anticipate*; because they are really found in other Grammars also, which are among 'the most approved.'

Education is the order of the day. But it will be a curse, instead of a blessing, unless it create good habits of mind, since the form, without the substance and effects, leads to the conceit and blind presumption which have given rise to the proverb, that a little knowledge is a dangerous thing. No true knowledge is dangerous in any quantity; it is the affectation which, in this case as in many others, brings shame upon the reality.

*Note.*—The number of Pinnock's Catechisms, on various subjects, is about eighty. Among other matters, they treat of 'Agriculture,' 'Electricity,' 'Hebrew Grammar,' 'Heraldry,' 'Medicine,' 'Painting in Oil,' 'Universal History,' 'Theology,' 'Geology,' and 'General Knowledge,' &c. &c. &c.

There are also forty-two Catechisms of 'County Histories.'

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## MISCELLANEOUS.

## FRANCE.

**FRENCH INSTITUTE.**—On the 25th of August, 1830, the Académie Française, at a grand session, awarded the prizes instituted by M. de Monthion for works calculated to have the most beneficial effect on the public morals. A first prize of 8000 francs was awarded to J. B. Say, for his work, entitled “Cours complet d’Economie Politique pratique;” and a second of 3000 fr. to Charles Lucas for his essay, “Du Système Pénitentiaire en Europe et aux Etats-Unis.” A third prize of 3000 fr. was awarded to M. de Norvins for his poem, “De l’Immortalité de l’âme:” this is the first time, it is believed, that the Monthion prize has been awarded to a poem. The fourth prize was awarded to M. Alissan de Chazet, for his book, entitled “Des Abus des Lois et des Mœurs.” This last work, besides being an inferior essay, contains views and opinions quite at variance with those expressed by Say and Lucas. For example, M. Chazet is the advocate of capital punishment in cases which fall short of the culpability of the crime of murder, and in his chapter on usury he is at variance with Say. It is not possible to reconcile the judgments which the Academy has passed by rewarding such different works.—*Le Globe, August 27, 1830.*

**PARIS.**—The numismatic collection of the late M. Gossellin is to be sold at Paris the 17th of this month (Jan. 1831). Most of the pieces are Greek silver coins, and were selected by their learned owner to illustrate the mode of fabrication and the progress of the art. There is no complete series of the coins of Greek towns in this collection, which is more remarkable in this department for the rarity and value of its pieces than for the number. One of the Sicilian coins of the town of Zancle has the legend ΔΑΝΚΔΑ, which is a form very uncommon. (See Mionnet.) M. Gossellin has also left a collection of silver Roman medals, consisting of more than 5000 pieces, all in good preservation, and comprehending a period from the time of Pompey to the taking of Constantinople.—*Notice par Raoul-Rochette.*

**FRENCH GYMNASIA.**—The revived military mania has extended itself even to scholastic institutions among our French neighbours; for we observe that the Minister of Public Instruction has directed that the academical subdivisions of the day, observed in the interior of the schools, shall be announced by *beat of drum*;—item, that the superintendent of the establishment shall select one, and in case of need, two *serjeants* for each class, from the number of such pupils as have distinguished themselves by attention to their studies, and general good conduct; and lastly, that during the hours of recreation, on every Thursday, the pupils shall perform *military exercises*, under the superintendence of a master, specially appointed for that purpose.

**STRASBOURG.**—The ancient university of Strasbourg possessed at one time, in Brunck, Oberlin, and Schweighæuser, a triumvirate of learned men seldom found at one place at the same time. Brunck and Oberlin died many years ago, but the death of Schweighæuser is recent enough to attract some attention. His laborious life, and his services to Greek literature deserve commemoration.

John Schweighæuser was born at Strasbourg in 1742, and in his native town he received a more complete and varied education than most men have been able to procure. For ten years he followed the courses of the different professors, applying himself with unwearied diligence to almost every branch of knowledge. Besides Latin and Greek, he studied Hebrew and Arabic, with mathematics, the various departments of physics, and the science of morals, and of the mind. He afterwards visited Paris, and the principal universities of Germany; at Leipzig he studied Arabic and Greek under Reiske, whose wife was a great proficient in these studies, and with the other pupils attended her husband's class. Schweighæuser spent also some time in England at London and Oxford, examining the public libraries and enjoying the acquaintance of many distinguished men. On his return, after an absence of more than two years, he was appointed, in 1770, adjunct professor of logic and metaphysics, which chair he held till 1777, when he was elected professor of Greek and Oriental languages. Though he was not inactive as a professor of metaphysics, as we may see from his extant essays, it is as an editor of Greek authors that he has gained his chief celebrity. From the year 1777 to the end of a very long life he was engaged in active instruction, and in the labour of correcting and explaining Greek texts. Dr. Musgrave had designed to give a new edition of Appian, and applied to Brunck for information about the variations of an Augsburg MS. Brunck referred the doctor to Schweighæuser, into whose hands the labour of the new edition ultimately fell. It was published in 1785, and established at once for the editor the reputation of an industrious and skilful critic. In 1789 he published some observations, grammatical and critical, on the Lexicon of Suidas, and these were soon followed by the first volume of his Polybius. The labour that this undertaking required was partly interrupted by the political troubles of the period, in which, though he took no part, he was exposed to suspicion and annoyance on account of his supposed hostility to republican principles.

The ninth and last volume of his edition of Polybius appeared in 1795; and Schweighæuser returned from an exile into which he had been driven by the violence of the revolutionary party. On the opening of the central school of the Lower Rhine, Schweighæuser was appointed professor of ancient literature, and he gave instruction in the Greek and Arabic languages. As a teacher he was zealous, persevering, and successful, inculcating the importance of industry and method, which he exemplified in his own conduct. Somewhat later, when the Protestant Academy of Strasbourg took the place of the ancient university, he was restored to his chair, from which he continued to teach, though the university was now reduced

to the rank of a mere seminary. On the formation of the French Institute, he was appointed a corresponding member; and afterwards, when it was re-organized and divided into the four academies, he was named a member of the Academy of Inscriptions and Belles Lettres.

His next important publications were the *Remains of Epictetus*, and a new edition of *Athenæus*, which was undertaken at the request of the Typographical Society of Deux-Ponts. This edition owes much of its value to a Venice MS. which once belonged to Cardinal Bessarion, and which Schweighæuser discovered to be that from which all the other known MSS. of *Athenæus* are derived. In 1807 the new edition, in 14 volumes, octavo, was completed. Besides these laborious undertakings, Schweighæuser had innumerable engagements as a teacher, as conservator of the public library, and as an active correspondent with men of learning. His habits of order, punctuality, and industry enabled him to accomplish all. In this short notice we pass over many minor events of his literary life to mention the last and one of the most important of them. His edition of *Herodotus* he commenced in 1806, at the age of 64, and, after ten years of labour, he completed it in 1816, in his 74th year. This edition, founded on a more accurate examination\* of the MS. than that of Wesseling, contains the various readings, the translation of Laurentius *Valla* improved, and the entire notes of Wesseling and Valcknaer, with some extracts from those of Gronovius, and remarks by the editor. A lexicon to *Herodotus*, published some years later, when he had passed his 80th year, completed the critical labours of this veteran scholar. Among the tokens of regard which he received, we should not omit to mention that the London Royal Society of Literature presented him, in 1826, with one of their gold medals, in testimony of their respect for his services to Greek learning. He did not discontinue his functions as a teacher of Greek till his 82d year, when he retired from his labours, and enjoyed for several years the pleasures of social intercourse, of easy study, and the respect and affection of his descendants. He died in January, 1830, at the age of 87 years, 7 months. Schweighæuser was a man of sound and extensive learning, zealous in the discharge of all his duties, firm, upright, and beloved by those who knew him.

—J. H. Schnitzler. *Revue Encyclopédique*, August, 1830.

#### GERMANY, &c.

**ORIENTAL LITERATURE.**—Professor Freytag is unremitting in his zeal for the promotion of Arabic literature in Germany. His edition of the *Hamasa*, and the first part of his Arabic Dictionary (containing the letters *Eliph—Kha*) are already in the hands of all Arabic scholars. His latest publication is a learned work on Arabic Metrics (*Darstellung der Arabischen Verskunst*. Bonn, 1830. 557 pp. 8vo). He is now about to print the well-known work of Ebn Arabshah, entitled *Fakihat el Kholafa*.

\* Professor Gaisford has since collated the Sancroft MS. more accurately.

Professor Bopp has just presented us with the first part of a new edition of his *Nalus*, by the first publication of which, in 1819, he rendered so signal a service to Sanscrit literature. On comparing this new edition with the old, we observe many great improvements, particularly in the Latin translation. In reprinting the original text, Professor Bopp adheres to the principle laid down by Baron William Humboldt, of entirely dissolving the *Sandhi* (or euphonic assimilation and coalescence of the final and initial letters of words following one another, through which, in Sanscrit manuscripts, each verse has the appearance of only one entire word), and exhibiting each word in its detached and isolated shape. But notwithstanding the luminous arguments adduced in support of this mode of printing Sanscrit texts, by Baron Humboldt, and notwithstanding the great convenience accruing from this plan to the reader, who can now, at one glance, recognize the different notional elements of a sentence, expressed by as many distinct individual words, we cannot, for reasons which space forbids us here to detail, but consider it contrary to the true character of the Devanagari alphabet, which is originally *syllabic*, and thus materially different from the alphabets to the use of which we are accustomed, and in which syllables are written by a *juxtaposition* of signs expressive of the consonants and vowels.

Dr. Benary, a distinguished pupil of Professor Bopp, and now attached as a private lecturer to the University of Berlin, has given to the public a very good edition of the *Nalodaya*, a very artificial and difficult Sanscrit poem, which is generally ascribed to Kalidasa, but which can hardly have been written by the immortal author of *Sakuntala*, and of the *Raghuvansa*. Dr. Benary has given both the text and scholia from the Calcutta edition, printed in 1818, but purified from a great number of mistakes, and with the Sanscrit words separated in the manner just adverted to; accompanying the whole with a very close Latin translation, and critical notes, which afford ample proof of much philological skill.

The latest number of the periodical published by Prosessor von Schlegel, under the title *Indische Bibliothek*, contains a review of Bopp's Grammar of the Sanscrit Language, written by Professor Lassen, of the University of Bonn. Mr. Lassen endeavours to shew, and we think with very good success, that it is essential for the improvement of our grammatical knowledge of the Sanscrit language, to study the works of the native Indian grammarians, above all the aphorisms of Panini, and the commentaries thereupon.

The printing of the second volume of the Sanscrit text of Schlegel's *Ramayana* is rapidly advancing.

Professor Lassen's critical commentary to the edition of the *Hitopadesa*, lately published by him and Schlegel, is preparing for publication.

M. Chezy's elegant edition of *Sakuntala* has at last appeared. The Sanscrit text is accompanied with a new French translation, and copious notes; and, in an appendix, M. Chezy has also given the episode from the *Mahabharata*, which furnished Kalidasa with the subject of this much admired drama.

The fifth section of M. Eugene Burnouf's lithographed edition of the *Vendidad Zade*, a part of the *Zend Aresta*, has just appeared. We can as yet only admire the beautiful execution of this work, which is a strict *fac-simile* of the Paris manuscript. It is to be hoped that M. Burnouf's commentary will soon follow, and place the understanding of these important documents of the ancient Persian religion nearer within our reach.

"The old method of classical instruction, by means of interlineary versions, has been revived in England by *Locke*, who has caused to be printed, and has for sale, at the shop of the bookseller to the London University, the following Greek and Latin books, with interlinear versions, intended for the first course:—Phædrus; Ovid's Metamorphoses, 1st book; Virgil's *Æneid*, 1st book; &c. &c.; and in Greek, select Dialogues from Lucian; select Odes of Anacreon; Xenophon's Memorabilia, &c. The German language is said to be taught the same way. See *Literary Gazelle*, 1830, No. 685."

The above is an extract from the "Jahrbücher für Philologie und Poedagogik," of Jahn, for whose benefit we make the following remarks. The *Locke* alluded to is the celebrated John Locke, long since dead, whose system of teaching languages has been revived in England by Mr. John Taylor, bookseller and publisher to the London University. Mr. Taylor's interlineary versions are *not* used in the University of London, as the German journal seems to imply. We do not mean by this to pass any opinion on Mr. Taylor's books or plan: we simply state the fact. The students who enter the University must be qualified to read good authors without the aid of interlineary versions.

**ALLGEMEINE SCHULZEITUNG, Darmstadt, July, 1830.**—This journal attracts our attention to a curious circumstance in literary history. Dr. Covel, Master of Christ's College, Cambridge\*, was once chaplain to the English embassy at Constantinople. During his residence in that city, T. Gale, well known as a Greek scholar, sent him the titles of Greek MSS. of authors, either lost, or only known to us in part, which "were believed to be found in the libraries at Constantinople." Gale does not say where he got this catalogue. This letter to Covel, containing the list of MSS. (dated Nov. 26, 1672), is preserved in the Harleian Collection, No. 6,943, Letter 22. The following is the general title to the MSS. which are given, with their Greek names:—ταῦτα τὰ βιβλία σώζεται ἐν ταῖς τῆς Κωνσταντινουπόλεως βιβλιοθήκαις.

Then comes a pretty long list, in which we find, besides some books on biblical learning and church history, the complete History of Dion Cocceius, twenty-four plays of Menander, all Euripides, Philemon, Aristophanes, and Sophocles. The MSS. that have been enumerated are not specified as belonging to any particular library;

\* The German Review says, "of Christchurch College, Oxford." This, and one or two other trifling inaccuracies, have been corrected by a reference to the original letters.

but the other MSS. in the list are assigned to the libraries of the Patriarch, of Constantine Barinus, Antony Cantacuzenus, Manuel Eugenicos, and James Marmoretus.

Gale says further, in the same letter, "As for Menander, I was told in Cambridge (by one Jeremias Byzantius, now at Constantinople, and I hope known to you), that he has seen this book, and read it in the library of the Patriarch, as I remember."

The same article refers to a letter from Brother Robert Huntington (dated Aleppo, Feb. 24, 1670) to Covel, in which Huntington says, that he found the whole work of Diodorus and Polybius in the library at Patmos. Huntington's letter is No. 77 in the same collection. Perhaps it may be worth while to make a more minute search at Constantinople.

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MUNICH (*München*). The University of *München* had, in the winter of 1829-30, 1854 students, of whom 192 were foreigners; and 86 university instructors, of whom 51 were professors, 10 honorary, and 25 private teachers.—*Jahrbücher, &c. von Jahn.*

The new rector, Dr. Allioli, delivered his inaugural oration on the 26th of November, before a numerous assemblage of the professors and students of this University, in the academical saloon. He dwelt at length on the means which universities afford of rearing a scientific education on the ground-work of religious principle, and referred to the academical statutes as a memorial of the paternal wisdom of his Bavarian Majesty, their founder. He observed, that the progress which the members of the University had made in the several branches of science and learning, was in perfect unison with the spirit and object which such an institution professed; and he then entered into an impressive consideration of the necessity of adding to scientific exertions, in which he acknowledged that the University had highly distinguished itself, the far more important duty of cultivating pure morals and sound religion,—a duty of which the ameliorated conduct of his young auditory evinced that they were acquiring a gradually deeper and improving sense.

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Up to the 27th of November, six hundred fresh students had matriculated for the winter-session, being fifty more than had entered last year.

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KÖNIGSBERG.—According to the printed papers this University had, in the winter of 1829-30, 416 students, of whom 215 studied theology, 114 jurisprudence, 19 medicine, 21 philosophy, 24 philology, 13 mathematics, 9 financial science (*cameralwissenschaften*), and 1 technology.—*Jahrbüch.*

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COBURG.—The course of studies for the summer of 1830, in the Gymnasium of Coburg, though there are only three classes (*Selecta, Prima, and Secunda*), is very comprehensive, and of a high character. The Latin, Greek, Hebrew, German, French, English, Italian, and Spanish languages are taught (the three last-mentioned only privately); history, antiquities, mathematics, natural history,

and geography ; the doctrines of religion, philosophy, and drawing. We may judge of the high position which the Gymnasium assumes by what follows. In Latin, and in *Secunda*, the instruction begins with Terence, Cæsar (Bell. Gall.), Cicero's *Cato Major*, and Becker's *Elegeia Romana*; and, in *Selecta*, ends with Cicero's Philosophical and Rhetorical Writings, and Horace's Epistles ; while in *Prima* are read Horace's Odes, Livy, and Cicero's Orations.

The Greek instruction begins with Xenophon's *Anabasis*, Homer's *Odyssey*, and Greek Grammar ; and ends with Plato, Thucydides, and Euripides. History is taught completely ; and in the philosophical department, even aesthetics are included ; while in mathematics, in *Secunda* and *Prima*, only arithmetic ; and in *Selecta*, only algebra, are taught.—*Jahrbüch.*

**BERLIN.**—*The Geographical Reliefs of K. W. Kummer, of Berlin.*—These reliefs differ from common globes and maps most essentially in the following particulars : instead of representing the hills and valleys by etching, they exhibit real elevations and depressions, corresponding to those on the earth's surface. The mountains and valleys are thus made visible and palpable ; the coast, also, is clearly raised above the level of the sea, and its peculiar character, whether of lofty rock, or level sand, is accurately delineated. The high table-lands, like those of central Asia, are placed on a higher level than the flat lands near the coasts ; and the rivers and lakes are seen confined within their channels and basins. Not only is the general direction of the hills clearly laid down, but also the varieties in their steepness, their declivities, and the great isolated summits are delineated in their proper proportions. Appropriate colours, too, are used ; the eternal snow of the highest mountain-tops, and the ice of the polar regions, are represented white ; the sandy deserts yellow ; the steppes brown, or a yellow-brown ; the stony, barren regions grey and uneven ; the forests green ; and all water is made blue. The material employed is paper of a fine and light kind, not liable to be broken ; the weight of one of the largest reliefs is very small, and they may be handled without any risk of damaging them. Names are also written on these reliefs, and the clearness even of the smaller characters is surprising.

This method of Kummer has been applied by him both to globes and to flat surfaces, or relief-maps (*Relief-Erdkugeln und Landkarten*), of various sizes. Amongst them are a large globe of 26 Paris inches in diameter ; one of 16, and another of 2½. Portions of the great sphere may be bought separately, it being divided into six parts. Europe may be had by itself, price 11 or 12 German dollars ;\* Asia for 16 or 17. If the names are omitted, the parts are, respectively, about two dollars cheaper. There are relief-maps of Germany, of the Island of Rügen, of the Mountain-Range of Mont-Blanc, and of France. The map of France is on a scale in which the lined measure is  $\frac{1}{4,000,000}$  of the real lineal measure on the earth's surface ; it is 24 Paris inches long, 21 broad, and comprises the country from Cologne and Dover as far as Figueras and Geneva.

\* The German dollar is about 3s.

in the direction of north and south. It comprehends the Pyrenees, the whole of Switzerland, and the valley of the Po. The price of this is not mentioned.

The price of the map of Germany is, without names, 8 or 10 dollars; with names in German characters, and with the addition of the places where the rivers are crossed, and of the parts that are navigable, the cost is 14 to 16 dollars; with the political divisions added to the above, the price is 18 to 20 dollars.

It has been objected to the method of Kummer, that the true ratio between the lineal horizontal and vertical measures is not preserved. This is true: but though the real ratio between the horizontal and vertical measure is not observed, the proportion between the various *vertical* heights, among themselves, is strictly adhered to, and it is all that is necessary. It would not be possible to represent mountains and valleys with any degree of clearness, in such a map as that of Germany, for example, without giving to the heights of the hills a greater elevation than is due to them, compared with the horizontal measures; and if the *true* horizontal and vertical proportions were observed, it would only be practicable to delineate, by the aid of relief, very small districts. The objections made to Kummer's reliefs may be made to common maps also, where the breadths of rivers are often greater on the paper than they ought to be.

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**THE PRUSSIAN UNIVERSITIES AND SCHOOLS.**—The sums assigned by the Prussian government for the maintenance of their six universities in the year 1829 were as follows:

Berlin (independently of 5540 <i>l.</i> paid for the support of scientific institutions) . . . . .	£13,150
Bonn . . . . .	14,830
Breslau . . . . .	10,520
Halle . . . . .	10,280
Königsberg . . . . .	9,010
Greifswalde . . . . .	8,320
 Total . . . . .	 £66,110

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These sums go to provide for the current expenses of each institution, and include certain allowances to indigent students, as well as the official salaries to the professors, whose remuneration, however, is principally derived from the fees paid for attendance upon their *pælections*.

The *gelehrte schulen*, or “grammar schools,” are also establishments subject to the control of the government, and supported essentially at the expense of the state. Their number in 1829 was, for *Eastern Prussia*, 8; *Western Prussia*, 6; *Brandenburg*, 18; *Pomerania*, 6; *Silesia*, 21; *Posen*, 9; *Prussian Saxony*, 22; *Westphalia*, 19; *Juliers, Cleves, and Berg*, 12; and the *Nether Rhine*, 17. In all, 132.

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**UNIVERSITY OF BERLIN.**—On the 30th of December the students frequenting the celebrated Professor Hegel's lectures presented him with a gold medal, in testimony of the grateful sense they entertained of the judgment and ability with which he had discharged the duties of Rector of the University. The front of this medal exhibits an excellent likeness of Hegel; and the reverse, the reconciliation of philosophy with religion. Independently of the interest it derives from circumstances, as a mere work of art it does honour to the talents of Drake, a pupil of Professor Rauch.

**M. Abrahamson**, the great scholastic philanthropist of Denmark, who was the first to introduce the blessings of mutual instruction into that country, states a most interesting fact as connected with the spread of education, and, we cannot doubt, with the *march of intellect*. Out of a single school, founded in the early part of the year 1819, seven had sprung up before it closed; in 1820 the number had increased to 11; in 1821, to 15; in 1822, to 35; in 1823, to 244; in 1824, to 605; in 1825, to 1143; in 1826, to 1545; in 1827, to 2003; in 1828, to 2302; and at the end of last year (1829), to 2646!

#### LOW COUNTRIES.

**HOLLAND.**—Died, on the 27th of April, 1830, at her country-house, near Leyden, the widow of Wyttenbach. In 1827 she received, from the University of Marburgh, the diploma of Doctor. She is well known by her philosophical works, and her zeal in favour of the cause of the independence of Greece.—*Jahrbüch, von Jahn*.

**NETHERLANDS.**—The six Universities of this kingdom received from the government, during the year 1829-30, the sum of 480,000 florins. Out of this, Löwen (Louvain) had 120,000 fl.; Lüttich (Liege) 70,000 fl.; Leyden 80,000 fl.; Utrecht, 70,000 fl.; Ghent 70,000 fl.; and Gröningen 70,000 fl.

#### RUSSIA.

The University of Petersburgh, which in 1826 had only 30 pupils, reckoned 177 in the year 1829. The number of students in the eight governments, comprised within the university district of Petersburgh, was 10,200.

The number of pupils in the University of Moscow, which celebrated its seventy-fifth anniversary in Jan. 1830, was 660 during the scholastic year of 1829, without reckoning 18 candidates, and 38 medical students, who were continuing their studies there. The whole number of pupils in the 296 places of education, which are distributed over the eleven governments comprehended in the university district, was 15,601. The following table gives some more precise information.

Number and Kind of School.	Number of Pupils.	Number and Kind of School.	Number of Pupils.
11 Gymnasia . . . . .	1,089	University of Moscow	716
94 Provincial Schools	7,506	Boarding-School for the Nobility, Moscow	272
134 Parish and Primary Schools . . . . .	4,945	High School of Demidof, at Iaroslavle. . .	79
54 Boarding-Schools and Private Schools	{ Boys, 362 Girls, 632	Total . . 296	Total, 15,601

The number of pupils in 1829 was 1,300 more than in 1828. The number of professors and masters was 827, being about 1 for every 18 pupils.

The other Universities of Russia—that of Abo, transferred in 1828, after the burning of the town, to Helsingfors; Petersburg, Kazan, Kharkof, Dorpat, and Wilna, do not publish similar documents, which is much to be regretted, as they would form the basis of a comparison between the number of pupils and the whole population in any one government, and all through the empire. All that has hitherto been published on this subject, in the journals, is very inexact and incomplete.—*Serge Poltoratzky of Moscow.*

*A Table of the Eleven Governments of the District of Moscow, classed according to the Number of their Pupils.*

Governments.	No. of Pupils.	Governments.	No. of Pupils.
1. Moscow . . . . .	3,909	7. Tver . . . . .	1,187
2. Riazane . . . . .	1,395	8. Iaroslavle . . . . .	1,087
3. Toula . . . . .	1,389	9. Novgorod . . . . .	1,047
4. Vladimir . . . . .	1,373	10. Tambof. . . . .	1,009
5. Orel. . . . .	1,371	11. Kostroma . . . . .	634
6. Voronège . . . . .	1,200	Total . . . 44.	Total 15,601

*Revue Encyclopédique.*

The whole Russian empire is divided into seven university districts, the Grand Duchy of Finland being included, and each district

comprehends a larger or smaller number of governments and provinces. A curator is at the head of each district, and the minister of public instruction has the general superintendence. Besides a University in each district, there are also at least as many Gymnasia as the university district contains governments, and sometimes more ; secondary schools and primary schools are still more numerous.—*Schnitzler, Essai d'une Statistique Générale de l'Empire de la Russie.*

The whole population of the eleven governments of the Moscow university district is 13,858,100, according to Schnitzler's tables, which gives a result of about one person in every 824, who receives instruction in the schools or colleges. The government of Kostroma, which is watered by a north-western branch of the Don, contains the greatest population and the smallest number of scholars, one person in every 2,300 receiving the benefits of instruction. The population of Kostroma is purely Russian.

The number of French journals published in Russia at present (1830) is eight, of which four are published at Petersburg, one at Moscow, and three at Odessa. Some of these journals are newspapers, appearing several times a week ; others are published monthly, and are appropriated to scientific and practical objects. One of the Petersburg journals, and two of the Odessa, are published both in French and Russian.—*Revue Encyclopédique.*

### ITALY.

There appeared in Italy, in 1829, a work entitled, “Vie d'Agricola par Tacite, traduite par N(apoleone) L(uigi) B(onaparte).” Florence, 1829.

A translation of Hallam's “History of Europe, in the Middle Ages,” by M. Leoni, is announced by a publisher at Lugano. The same publisher also gives notice of an Italian translation of Mill's “Elements of Political Economy,” from the last English edition.

### GREECE.

**STATE OF ITS SCHOOLS** (from Mr. Barker's published account).—It is computed that there are in Greece about 20 schools, which contain from 50 to 100 scholars each : the rest are not so numerously attended. The asylum for orphans at Ægina contains 500 children ; the great school occupies one of the chief churches, but it is not large enough for the pupils. In this school ancient Greek, geography, and geometry are taught, together with theology.

Mr. B. represents the ardour of the young Greeks for instruction to be very great, in spite of all the difficulties which they have still to struggle with. Sometimes the children may be seen studying their lessons under an old wall. It frequently happens that the miserable houses are not large enough for all the classes, some of which take their station in the open air. Books are scarce : in a school of 40 or 50 boys it would be difficult to find an entire book. Some are obliged to be satisfied with half a one.

In the elementary schools it appears that the system of mutual instruction is adopted.

At Napoli di Romania, Mr. B. found 150 scholars in a Turkish mosque; and at Demitran, in Arcadia, a Greek school of 50 boys, and one of mutual instruction containing 110. Demitran had a good library, but the soldiers in the late wars used all the books to make cartridges. In the little island of Syra, Mr. B. found that an American missionary had been very successful in establishing the schools of mutual instruction. Korti, in the isle of Andros, has a Greek school, founded in 1813, with forty pupils, who learn ancient Greek, theology, mathematics, and geography. An elementary school for 300 children has just been built there. At Andros, or Kato Castro, the capital of the island, there are also two schools, one called the Greek or Hellenic, the other a school of mutual instruction. The islands of Mikoni, Naxia, and Paros, have also their schools. Before the revolution, Siphnos had an excellent school, which furnished Greece with several bishops, but it is now in a less flourishing state. Serpho and Thermia are both well provided with schools. Since the visit of Mr. B. the elementary schools have greatly increased under the care of Capo D'Istria, and are now not fewer than 400: Ægina alone contains 22. The *Courier de la Grèce* (1890) announced the whole number of students in the Peloponnesus and the islands to be 7824. The children in the elementary schools learn to read and write, and acquire some small knowledge of grammar and arithmetic, which is as much as their masters can teach them.—*Journal d'Education*.

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ÆGINA, 17th Dec. 1829.—The President Count Capo d' Istria appointed three commissions. The first was instructed to prepare without delay a Catechism and a Prayer Book. To the second commission was intrusted the task of preparing a Greek Grammar and an Anthology: the Diakonus Costantes, with Professors Gennadios and Bentilios, form this commission. The third commission was instructed to revise the works that had been translated for the use of the schools of mutual instruction, and to give in a report on this branch of public education.—*Allgemeine Schulzeitung, Darmstadt, March, 1830.*

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The press at Malta, belonging to one of the London religious societies, is actively employed in printing cheap books in modern Greek. Most of them are on religious subjects, or closely connected topics. For example, there was published in 1830, intitled *Neapd Λυρά*, or the Youthful Lyre, a collection of sacred songs, in imitation of those of Watts and Mrs. Taylor. In the society's list we find also an Epitome of English Grammar, and a Manual of Geography, intended for the use of Greek youth.

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SMYRNA, 1830.—A society in the U. S. of North America has established a Protestant school at Smyrna, in which Latin and the modern languages are taught. Children of all religious denomina-

tions are admitted. As the society pay the director and teachers of this school, the sum required from the pupils is small; and the children of poor parents are taught gratuitously. Mr. Brewer, the director, gives also instruction in English at the Greek gymnasium of Smyrna.

### UNITED STATES.

There are in the United States of North America 43 incorporated colleges or universities. Though the returns are incomplete from some of them, the following table will shew many important statistical facts:—

The number of instructors in 32 colleges is . . . .	217
The number of graduates in 30 colleges, in 1828, was	652
The number of under-graduates in 33 colls. in 1828-9	2,809
Number of volumes in 30 college libraries . . . .	128,118
Number of volumes in 25 students' libraries . . . .	66,730

Yale College, in Connecticut, and Harvard University, in Massachusetts, have the greatest number of teachers and pupils; there being in the former 16 teachers, and 324 students; in the latter 15 teachers, and 254 students. The largest college library is that of Harvard, which contains 30,000 volumes; the next is that of St. Mary's College, Baltimore, which has 10,000 volumes. Besides these, there are four colleges which have libraries to the amount of 8,000 volumes. Out of the whole list of colleges, 43, a return is made of the name and title of the president or provost of 40; from which it appears that the presidents or provosts of 36 colleges are clergymen.

There are also 18 theological seminaries in the United States, belonging to the different denominations of Christians. Out of these, 11 date their origin since 1820, and 17 since the year 1800. The whole number of students in 15 of them, in 1829, was 599, being an average of 40 pupils for each seminary.—*From the Journal of the American Education Society.*

A catalogue of the library of Harvard University, in Cambridge, Massachusetts, was published in 1830, in 3 volumes, octavo. From this catalogue it appears that the library now contains more than 30,000 bound books, and several thousand tracts. In 1790 there were only 12,000 volumes. The first two volumes of the catalogue contain a list of all the books in *alphabetical* order; and the third consists of a systematic index, or a classed catalogue of the whole.—*Christian Examiner, Boston, U. S.*

There are many other considerable libraries in the United States; as at Philadelphia, Washington (the Congress library), and other places; but we believe that we are right in stating that the library of Harvard University is at present the most extensive.

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**AMERICAN EDUCATION SOCIETY.**—The following extract from a notice that appears in one of the numbers of the Society's Journal, will shew the pains that they take to obtain exact statistical informa-

tion. "In consequence of our great desire to be strictly *accurate* in statistical accounts, we have uniformly taken the pains, and been at the expense, to send *blank schedules* to the several colleges, containing places for all the items to be found in our published views, and have requested that they might be filled up by the officers of the institution, or by some responsible correspondent, and then forwarded for publication."

### EGYPT.

#### *Education in Egypt, under Mohammed Ali Pacha.*

ELEMENTARY SCHOOL at Cairo.—600 boys, Turks and Arabs, are taught the Arabic, Turkish, and Italian languages, drawing, arithmetic, and geometry, military exercise, and the art of printing.

MILITARY COLLEGE at Dgiaad-Abad, four leagues north of Cairo, on the main road to Syria.—Course of studies:—1st year. Arithmetic, drawing figures and landscape, French language, manual and platoon exercise.—2d year. Geometry, camp fortification, topography, and battalion exercise.—3d year. Trigonometry, permanent fortification, map drawing, reconnoitring, and field manœuvres.—4th year. Physics and chemistry, pure mathematics, geography, history, strategy, engineering, hydraulics. Out of this college, those who make most proficiency are promoted to commissions in the engineers, artillery, and staff. The rest are appointed to the line.

MEDICAL SCHOOL at Abuzebel, near to Dgiaad-Abad.—About 110 Arab pupils are taught pathology, chemistry and pharmacy, surgery, and botany, and also hear clinical lectures. A hospital is attached to this school.—*From the History of the Regeneration of Egypt, by Jules Planat, Paris, 1830.*

### CAPE OF GOOD HOPE.

The College of Southern Africa, established at Cape Town, opened in October, 1829. The branches for which teachers are already engaged, are English, Dutch, French, Latin, and Greek, writing, arithmetic, geography, astronomy, mathematics, and mechanics.—*Journal d'Education, 1830.*

## B R I T I S H.

*Cambridge, Dec. 17.—PRIZE SUBJECTS.*—The following are the subjects for the present year:—

1. The Chancellor's gold medal for English poetry. "The attempts which have been made of late years by sea and land to discover a north-west passage."

2. The members' prizes of 15 guineas each for Latin prose composition:—

(1) For the Bachelors, "Utrum boni plus an mali hominibus et civitatibus attulerit dicendi copia?"

(2) For the Undergraduates, "Utrum fides Punica ea esset qualem perhibent scriptores Romani?"

3. Sir W. Brown's gold medals:—

(1) For the Greek ode, "Granta Illustrissimo Regi Gulielmo Quarto gratulatur quod in solium Britanniae successerit."

(2) For the Latin ode, "Magicas accingitur artes."

(3) For the Greek epigram, "Magnas inter opes inops."

(4) For the Latin epigram, "Prudens simplicitas."

4. Porson prize:—

Shakspeare—*As you Like It*.—Act 2, scene 1. Beginning, "Today my Lord of Amiens and myself," &c., and ending, "Native dwelling-place."

N.B. The metre to be "Tragicum Iambicum Trimetrum Acatalecticum." These exercises are to be accentuated, and accompanied by a literal Latin prose version.

The Seatonian prizes for 1830 were on the 29th October adjudged to the Rev. R. Parkinson, M.A., of St. John's College, and W. M. Praed, Esq. M.A., Fellow of Trinity College. Subject of the poem, "the Ascent of Elijah."

The subject of the Norrisean prize essay for 1831 is "The Proof of the Divine Origin of the Gospel, derived from the Nature of the Rewards and Punishments it holds out."

**LONDON UNIVERSITY.**—Mr. John Taylor, Bookseller to the London University, has just published a Calendar, which contains a short sketch of the origin and constitution of the London University; together with a complete outline of each professor's course and mode of teaching, and the examination questions of last midsummer. It contains also a description of the museums, library, &c., and a list of the proprietors.

**LONDON UNIVERSITY SCHOOL.**—This school opened on the first of last November; head master, the Rev. H. Browne, M.A. Corp. Christ. Coll. Cambridge. The number of scholars previous to the Christmas vacation was 60. The number entered for the ensuing term is 80.

**KING'S COLLEGE, LONDON.**—The appointments hitherto made by the Council of this Institution are,

J. H. Green, Esq., to the Professorship of Surgery.

Herbert Mayo, Esq.	"	"	Anatomy and Physiology.
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Bisset Hawkins, M.D.	"	"	Theory of Physic and Therapeutics.
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Francis Hawkins, M.D.	"	"	Practice of Physic.
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The Rev. T. G. Hall, A.M.	"	"	Mathematics.
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James Rennie, Esq. A.M.	"	"	Natural History.
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The Rev. J. R. Major, A.M., to the Head-mastership of the Lower Department.			
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It is confidently expected that both the Higher and Lower Depart-

ment of the College will be opened for the reception of students in the course of the ensuing autumn.

#### PROPRIETARY SCHOOLS.

The advantages afforded by the formation of proprietary schools having rendered the desire for their establishment very prevalent, we are induced to detail at some length the plan of one of them, in order to facilitate their introduction into those places where a superior and economical course of instruction is required. It is worthy of remark, that this plan was first suggested by a letter of Pliny, the younger\*, in which he says, that inquiring of the son of one of his neighbours why he did not study oratory nearer home, instead of going to a distance for that purpose, the father answered, that there were no professors: to which he replied, "Surely it nearly concerns you who are fathers (there were several present), that your sons should receive their education here rather than any where else; for where can they be placed more agreeably than in their own country, or instructed with more safety and less expense than at home, and under the eye of their parents? Upon what very easy terms might you, by a general contribution, procure proper masters, if you would only apply towards the raising a salary for them, the extraordinary expense it costs you for your sons' journeys, lodgings, and whatever else you pay for upon account of their being abroad." It is upon this principle that several schools have been already founded, the rules for the regulation of which have been hitherto very similar. The following is an abstract of those which have been adopted by the proprietors of the Pimlico Grammar School :

**SECT. I.—Rule 1.** The institution to be divided into one hundred shares, no proprietor being allowed to hold more than three.

2. Each proprietor to pay £15 for each share he may hold.
3. Each proprietor to pay an annual sum of nine guineas, by equal quarterly payments, in advance, for each share.
4. No person to be considered a proprietor until the aforesaid £15 shall have been paid.
5. Each proprietor to be answerable for all quarterly payments, &c., whether he have a nominee in the school or not.
6. Any proprietor neglecting to pay his subscription, or any other money due, beyond a limited time, to be subjected to a fine, and ultimately to a forfeiture of his share, such proprietor, however, to have the power of appealing to a special general meeting, who may determine whether any and what relief shall be given.

7. Every proprietor to have the privilege of nominating one pupil in respect of each share he may hold, such pupil, if the son, grandson, stepson, brother, or nephew of the nominator, to be admitted without ballot; but if not so related, not to be admitted without the consent of the directors, such consent to be ascertained by ballot.

8. Shares may be bequeathed or transferred; but, in cases of transfer, the grantees to be first approved of by ballot, at a general meeting of proprietors.

\* Letter XIII. to Cornelius Tacitus.

9. Any person inheriting a share, or to whom a share may have been bequeathed, to be entitled to nominate a pupil, in respect to such share, the pupil to be admitted by ballot only.

10. Any person obtaining a share as above, may be admitted as a proprietor by ballot ; or, if not admitted, the directors to take his share or shares at the price of the *last* transferred share.

11. Any proprietor to have the power of inspecting the minutes of the directors, at any general meeting, on giving previous notice of his intention to the secretary.

12. Interest to be paid to the proprietors, at the rate of four per cent. per annum, as soon as the funds will allow.

**SECT. II.—Rule 1.** An annual general meeting to be held, for the purpose of filling up vacancies in the committee, to receive the report of the preceding year, to pass the treasurer's accounts, and to inquire generally into the affairs of the institution.

2. Propositions for making any alteration in the rules of the institution not to be considered by any general meeting, unless a previous requisition, signed by ten proprietors, shall have been delivered to the secretary, thirty days before such meeting ; and such proposition not to be finally adopted, except at a subsequent *special* general meeting.

3. Special general meetings may be holden whenever the directors may deem it necessary, or whenever an appeal is made to the authority of such meeting ; or by the secretary, upon the requisition of seven proprietors.

4. Questions, at general meetings, to be decided by a majority, except on occasions of balloting for a proprietor or nominee, when not less than three-fourths of the votes shall be deemed to constitute a majority.

5. Proprietresses may vote by proxy, to be tendered by a proprietor, who cannot, however, hold more than one proxy.

6. The president to have the casting vote at all meetings.

7. A letter, sent to the usual place of residence of any proprietor, to be deemed sufficient notice.

**SECT. III.—Rule 1.** The affairs of the institution to be under the management and direction of a president, vice-presidents, three joint-treasurers, a secretary, a physician, two surgeons, an architect, a solicitor, and twelve other proprietors, any five to be competent to act as a board of directors.

2. One-fourth of the directors to retire annually, by rotation, and their places to be supplied from the general body of proprietors ; the retiring members to be re-eligible after one year. The directors to have power to fill up any vacancy that may occur, during their session, from among the proprietors.

3. The directors to have power to form bye-laws, provided they do not contravene the established laws and rules.

4. The directors to hold their meetings on the third Friday evening in every month, and oftener, whenever they shall consider it necessary.

5. The committee, at their monthly meetings, to choose two of

their body as visitors for the succeeding month, which visitors only are to have right of access to the school, during school hours, with liberty to introduce any other proprietor or stranger.

6. The visitors not to interfere with the internal regulations of the school, but to inspect the school at least once a week, and report to the directors.

**Sect. IV.**—Regulates the official duties of the president, treasurers, &c.

**Sect. V.—Rule 1.** The following masters to be appointed:—a head master, a second master, an assistant master, a French master, and a drawing master, with such other assistance as may be found necessary.

2. The masters to be elected by the directors, by ballot.

3. The head and second masters to be clergymen, and graduates of Oxford, Cambridge, or Dublin.

4. The masters not to be subject to removal, except on account of non-adherence to the rules of the institution, inability, incapacity, negligence, immoral conduct, &c. Three months' notice to be given by the secretary to any master intended to be removed, except in case of flagrant misconduct, or gross immorality. Any master, intending to resign, also to give three months' notice.

5. The internal regulation to be under the management of the head master.

6. and 7. The head master to keep a register of the scholars, and of the progress made by them in their studies, which register shall be open to the inspection of the visitors, and produced to the directors, at their periodical meetings.

8. The head master to report what books, mathematical instruments, &c. are required for the purposes of the institution; and also deliver an account of such books, instruments, &c. as, having been lost or wilfully destroyed by the pupils, ought to be charged to them.

9. The head master may suspend any of the other masters, for misconduct, except the second; but immediate notice to be given thereof to the secretary, in order to its being submitted to the directors.

10 and 11. The French and drawing masters to attend at such times as the head master may appoint, subject to the approval of the Directors.

12. The head master and second master are allowed to take boarders, who are scholars of the institution, but none others; the head master not to take more than fifteen, and the second master not more than ten.

13. The head and second masters, and assistant, to have the privilege of sending their own sons to the school, without being subjected to the annual payment.

14. The head, second, and assistant masters are to attend in the school-room from nine in the morning till twelve, and from two in the afternoon till five, during the summer half-year; in the winter half-year, the afternoon attendance to close at four.

15. None of the masters to be allowed to perform any duty, &c. which shall interfere with their attendance in the school.

16. The head master only to inflict corporeal punishment; and the cane to be used for that purpose.

17. Any master having cause of complaint relative to the school, to state the same in writing to the secretary, who is to submit it to the Directors.

SECT. VI.—*Rule 1.* No pupil to be admitted under seven years of age, nor until he has acquired some knowledge of reading, writing, and the two first rules of arithmetic.

2. The instruction is to embrace the Latin, Greek, French, and English languages, and literature; composition, elocution, the mathematics, and drawing. Lectures on subjects connected with the arts and sciences to be occasionally delivered by the masters to all the pupils, under the sanction of the committee.

3. A public examination of the pupils to take place in the week previous to the summer vacation.

4. Fifteen days' holidays are to be allowed at Christmas, and five weeks in the summer; at Easter from Good Friday to Easter Tuesday, both inclusive; a half-holiday on Wednesday and Saturday in each week, and his Majesty's birth-day.

5. Any pupil not returning on the day assigned, unless prevented by sufficient cause, to be fined ten shillings.

6. The head master may suspend any pupil for flagrant misconduct, and is immediately to apprise the visitors thereof, in order to its being submitted to the Directors, who may confirm or annul the same. An appeal to lie from the Directors to the proprietary.

SECT. VII.—*Rule 1.* The land, buildings, and other property of the institution to be vested in trustees, elected from among the proprietors.

2. Every transfer or bequest, &c. to be entered in the register of the institution; of which entry a certificate is to be given by the secretary, charging for the same one pound, over and above the stamp duty, to be carried to the general fund.

Such is a sketch of the rules and regulations of a proprietary school; sufficient, we trust, to enable those who, being impressed with a sense of the advantages of the plan, wish to co-operate in forming a similar establishment, to organise it in all its details without difficulty. The salaries to the masters are of course settled by the proprietary; at Rochester they are, for the head master, 350*l.* per annum, for the second master, 180*l.*, and for the assistant, 80*l.*

#### DISTRICT GRAMMAR SCHOOLS.

The proprietary schools established on the principle which led to the formation of King's College, London,—namely, “that instruction in the doctrines of Christianity, as taught by the United Church of England and Ireland, shall form an essential part of the course of education,” and which are in connexion with the College, are those of

*Hackney*.—Head Master, the Rev. E. Churton, A. M.—This

school was opened in the presence of the Lord Bishop of London, and commenced with 102 pupils, on the 2d of October last, it has at present 107; and it is expected that, by Easter next, the whole number of 150 will be completed.

*St. Peter's, Pimlico.*—This school was opened on the 26th of July last; the present number of pupils is 78; and the applications made for admission after Christmas next, will nearly complete the number of scholars for whom accommodation can be provided. The Rev. T. Sheepshanks, A.M., is Head Master.

*Islington.*—Head Master, the Rev. J. O. Parr, A.M.—The school was opened by the Lord Bishop of London, on the 20th of October last, and the number of students admitted is 67.

*Blackheath.*—This school will open in the beginning of January next, Head Master the Rev. — Tennant, A.M.; and the applications already made for admission are such as to justify the expectations entertained of its success.

#### BRISTOL COLLEGE.

At Bristol, the increasing necessity which was felt of obtaining for the youthful part of the population the means of acquiring a literary and scientific education on an enlarged scale, and at a moderate expense, having led to the establishment of an institution, under the title of "the Bristol College," the council appointed by the subscribers have issued an "Outline of the Plan of Education," proposed to be carried into effect, of which the following is an abstract.

" Experience has proved, that a close application to the exact sciences is the best discipline for the mind, and the most suitable preparation for its advancement in the schools of philosophy. The mathematics are therefore justly held to be an essential part of every liberal education.

" As the basis for acquirements in general literature, it is obvious that a sound and tolerably perfect acquaintance with the Greek and Latin languages, and with the classical writers of antiquity, is likewise indispensable; nor can these authors be understood, and read with full advantage, without the study of history, and its subsidiary branches of geography and chronology. Neither can the language and literature of our own country be neglected by any Englishman, who is desirous to hold a respectable rank in society, and to render his other acquisitions really and practically useful.

" It is intended, therefore, by the Council to appoint, in the first instance, a Principal and Vice-principal, with Professors or Tutors, in the subjects above-mentioned. Arrangements will be made subsequently, but it is hoped at no distant period, for affording the means of instruction in other departments of knowledge, which, though of secondary importance when compared with the foregoing, are yet in a greater or less degree advantageous. These appointments will probably be made in the following order, according to the views entertained by the Council of their relative utility:

" 1. Professors of the French and German languages and literature.

- “ 2. Of Chemistry and Natural Philosophy.
- “ 3. Of Natural History, including Zoology, Botany, Mineralogy, and Geology.
- “ 4. Of Political Economy.
- “ 5. Of the Hebrew, the Italian, the Spanish, and some other languages.

“ The division of the students into senior and junior classes, which has been found very beneficial in other institutions, will be adopted in the Bristol College: thus enabling each pupil to commence in that part of the course of education, for which he is best fitted by his previous attainments.

“ The junior classes will probably in a great measure consist of youths whose education has been hitherto incomplete; and their instruction will not differ materially, in its objects, from the plan pursued in the upper grades of academical schools. Due attention will be paid to blend mathematical learning with that which is strictly classical. In the former department, it is supposed, they will be sufficiently occupied with the first six books of Euclid, the higher branches of Arithmetic, and the introductory parts of Algebra. With respect to their classical studies, it is probable that the collections of Dalzel, or such authors as Herodian and Polynæus, in Greek, with selections from the best Latin writers, may answer every purpose. Proper care will at the same time be taken as to composition in prose and verse; while the fundamentals of grammar, prosody, and general information, will be laid or relaid as deeply as possible; so that when any youth ascends into the upper classes, he may proceed from the study of words to that of things, and endeavour to rear, upon a sound philological basis, his superstructure of knowledge, at once exact and comprehensive.

“ For the senior classes the following, or some nearly similar scheme of instruction will be pursued. Their classical studies, for the first two years, may principally have relation to the ancient poets, orators, and historians, while a third may be devoted chiefly to the works of the philosophical writers. During the former period, the most instructive pieces of the Greek drama, both tragic and comic, may be perused, and illustrated by historical and critical disquisitions; as also wholly, or in part, the poems of Theocritus, Callimachus, and Pindar; the orations of Isocrates, Demosthenes, and Æschines; and the great works of Xenophon, Herodotus, and Thucydides. Portions of the most important Roman authors, such as Livy, Tacitus, and Cicero, with selections from the poets, will be taken up in their appropriate places.

“ A series of lectures on classical criticism and composition may be delivered also, at this part of the course, founded on the Poetics and Rhetoric of Aristotle, and the works of Longinus and Quintilian. These may be read either during the second or third year, as circumstances may render it expedient, and they may be followed by a short course on logic.

“ The studies which are to be pursued during the third year, will be arranged nearly on the following method. Some of the dialogues

of Plato, as particularly the *Phædon*, and *Timæus*, and the *Ethics* of Aristotle, with some of the speculative works of Cicero, may be gone through, not merely as class books, but as illustrating the ancient forms of philosophy. With the same view, and in order to develope the history of human opinions, lectures may be delivered to the students, for which the celebrated work of Brucker furnishes an outline, during the earlier periods, and the writings of Stewart, Reid, and Playfair, in the more recent times. The principles on which the metaphysical systems of Kant and Fichte are founded, may be briefly examined; but the works of Locke, and Dugald Stewart, must be diligently studied, as affording the firmest ground for the discipline of the intellectual powers, and as illustrating the present state of mental philosophy.

"The Greek Testament will be used as a class-book, both in the senior and junior classes. Paley's 'Evidences of Christianity' will also be read by the former, and will be made the subject of examinations similar to those which are usual in the colleges at Cambridge.

"The Mathematics will be taught in separate classes, parallel perhaps to those before mentioned, or otherwise, as may hereafter seem advisable. It is intended however to adopt, with no more alteration than can be avoided, the plan at present pursued in Trinity College, Cambridge. It is expected that the student will have been grounded in the elements of Geometry and Algebra while in the junior classes. He will then proceed to Plane Trigonometry, to the higher parts of Algebra, and having become acquainted with the Differential and Integral Calculus, to the theory of Curves, and successively to Statics and Dynamics, Conic Sections, and the three first sections of Newton's *Principia*. Thus far he may advance during the first and second years: in the third, he will be occupied with the principles of Hydrostatics and Optics, and with the remainder of the first book of the *Principia*, as well as with Spherical Trigonometry and Physical Astronomy.

"With respect to the English language and literature, the attention of the pupils will be directed to the origin, formation, and progress of their native tongue; its etymology and relation to the Teutonic dialects, whence it is derived; its analysis, idioms, figures of speech, and other peculiarities of structure. The lectures on our own literature will consist of a history of its various branches, from the earliest era downwards, with a review of the works of our greatest writers, both in poetry and prose, whether romantic, dramatic, epic, lyrical, or miscellaneous; their productions in divinity, history, biography, ethics, oratory, and other departments of art and science; the periodical literature of the country; and generally its present state, and future prospects, in the republic of letters. These will be conducted in such a manner as to render them interesting not less to the public at large than to the regular members of the College.

"Universal History has also been considered an indispensable acquirement, and the mode of teaching it may be on the following plan. With the junior classes, the Professor will simply hear them

read elementary authors, keep up their attention, by examining them closely from time to time ; endeavour to awaken their interest in the subject before them, and prepare their minds for its ultimate study in connexion with Geography and Chronology, upon scientific principles. With regard to the senior classes, lectures may be delivered, succeeded by examinations on the matter of the last address. Although a minute knowledge of history cannot thus be communicated, its broad outline will be deeply impressed upon the understanding. Directions may be given for working out, or filling up the details, in private ; and the pupil may be spared much fruitless time and labour, while he is simultaneously acquiring habits of reflection, sound notions of criticism, correct ideas of the nature of moral evidence, enlarged views of men and things, with a decided preference for matters of fact and solid reason, rather than romance and vain hypothesis. His thoughts will be made to assume a practical instead of a speculative bias. The lectures may proceed in courses of from ten or twelve to twenty each, embracing successively the general, military, political, ecclesiastical, literary, and domestic departments, both ancient and modern, with the subsidiary branches of Medals and Diplomatics. They will in turn treat upon the Jews and other Oriental nations ; on Greece and Rome, through all their stages ; widening the survey to comprehend the whole world, in its descent towards later times ; and still more closely particularizing on those important features affecting our own age and country. Such topics moreover will be brought forward, as the origin and progress of society, the migrations of the human family, the power of cultivated intelligence, the course of civilization from the east to the west, and of influential conquest generally from the west to the east, their ruption of the barbarous nations, the hierarchical, monastic, and feudal systems, the history of arts, commerce, and inventions, the growth of opinions, the population and depopulation of the earth, navigation, manners, and customs, with the rise and fall of different empires, marking carefully the promulgation and development of Christianity, its beneficial results in every clime and era, and the causes by which those results have been accelerated or retarded."

Theological instruction, in the principles of the Church of England, will also be afforded within the walls of the College ; the Lectureship not to be a college appointment, but to be supported by those members of the Council and students who may wish to avail themselves of the advantages of such lectures ; the course of instruction to be conducted according to the following outline :

- “ 1. The evidence and doctrine of natural religion, as deduced by inference from the works of nature, from the phenomena of the human mind, and from the circumstances of mankind. The text-books of this part of the course may be the works of Derham and Paley on Natural Theology, and the Analogy of Bishop Butler.—
2. The evidences of Christianity—taking as text-books the works of Paley, Chalmers, and Less, on this subject.—3. A brief survey of biblical criticism, upon the basis of the lectures and translations of

Bishop Marsh, or at least the second volume of the ‘Introduction to the critical Study of the Scriptures, by the Rev. Hartwell Horne.—4. Scriptural Archaeology, with Sacred and Ecclesiastical History.—5. The doctrines of the Church of England.—6. The most important principles relative to Church discipline.

“General, particular, and especially terminal examinations, will take place, and be as frequent and public as may be deemed expedient; while suitable prizes will be offered, to stimulate the youthful aspirant, and foster a generous emulation.

“The College term will probably extend over ten months of the year, including short vacations at Christmas and Easter.

“Although the financial details are not sufficiently advanced to enable the Council to state exactly the expenses of instruction, yet it is right the public should be informed of their confident anticipation that the said course of education is not likely to cost more to the nominee of a proprietor than from £18 to £20 per annum.

“The remuneration of literary officers will be made to depend, either in whole or in part, upon the extent of their classes, so as to identify their several talents and interests with the fame, prosperity, and success of the College, over whose pupils they are called to preside.”

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**SHORT ACCOUNT OF THE EDUCATION OF THE POOR IN DEVON.**  
(From a correspondent).—The education of the lower classes in the county of Devon has made rapid advances within a few years. A considerable number of schools have been established; and, in almost every parish, Sunday-schools are now to be met with, under the superintendence of the minister, as well as day-schools. In an agricultural district the great disadvantage is, that families are scattered about in remote situations at a distance from the villages where the schools are; many children are therefore unable to attend regularly, particularly during the winter season. In many of these schools only reading is taught, and in some districts there appears to be a prejudice against the poor being instructed in writing; this is, however, declining, and many more are now taught to write than formerly. A great impediment to the general education of the poor in Devonshire, is the apprentice system. The children are bound out as apprentices when nine years of age, and instances occur too frequently of neglect on the part of their masters, in consequence of which the little that is learnt previous to their being bound out is soon forgotten. The greater part of the schools in the Devonshire villages are dames’ schools, the salary being generally insufficient to pay a man for devoting his time exclusively to instruction.

In the Report of the present year of the Society at Exeter for Promoting Christian Knowledge, a list is given of schools in the diocese, which are supplied with books from the society; many of these are Sunday-schools, and the number of children taught is,

In the Archdeaconry of Exeter . . .	8,505
Archdeaconry of Totness . . .	6,724

Archdeaconry of Barnstaple . .	3,131
Archdeaconry of Cornwall . .	4,883
Total . .	<u>23,243</u>

These schools must be considered as exclusively connected with the Church of England ; the old-established charity-schools, which are numerous, are not included. The present Bishop of Exeter (Dr. Carey), a few years ago, recommended to his clergy the establishment of parochial lending libraries, on the plan suggested by the Society for Diffusing Christian Knowledge. It appears, from the Report to which I have already alluded, that, in the archdeaconry of Exeter, there are 21 libraries of this description ; in Totness, 15 ; in Barnstaple, 8 ; and in Cornwall, 9. The books in these libraries must be selected from the catalogue of the society, and they are afforded at a cheap rate. The following is the catalogue of the library of a small parish near Exeter. I believe the books are lent to the poorer classes gratuitously.

1. Gostrell's Institutes.
2. Mann on the Four Gospels.
3. Trimmer's Scripture Catechism, Part I.
4. Ditto, Part II.
5. Horne's Commentary on the Psalms.
6. Burkitt's Help and Guide.
7. Rotheram's Essay on Faith.
8. Nelson's Companion.
9. .... Practice of true Devotion.
10. Wilson's Sacra Privata.
11. Duke's Lectures.
12. Secker on the Catechism.
13. Wilson's Principles and Duties.
14. Wall on Infant Baptism.
15. Nelson's Christian Sacrifice.
16. Wilson on the Lord's Supper.
17. Claims of the Established Church.
18. Whole Duty of Man.
19. Jones on the Trinity.
20. Wilson's Christian Knowledge and Practice.
21. Wilson's Sermons, vol. 1.
22. Wilson's Sermons, vol. 2.
23. .... Maxims of Piety.
24. Crossman's Introduction.
25. Mant on Regeneration and Conversion.
26. Walton's Lives.
27. Harte's Lectures on the Gospel.
28. Burnett's History of the Reformation, vol. 1.
29. Ditto, vol. 2.
30. History of the Wars of the Jews, vol. 1.
31. Ditto, vol. 2.
32. History of England, vol. 1.
33. Ditto, vol. 2.
34. Anson's Voyages.
35. Bingley's celebrated Voyagers.
36. Ditto ditto Travellers.
37. Life of Columbus.
38. Life of Captain Cook.
39. Sturm's Reflections.
40. Robinson Crusoe.
41. Life of the Duke of Wellington.
42. Beren's Christmas Stories.
43. History of Prince Lee Boo.

This list may be taken as a fair sample of what a parochial library contains. More than half the volumes are of a religious character, and the remainder mostly voyages and travels.

## ROYAL GEOGRAPHICAL SOCIETY.

The Royal Geographical Society of London, which was instituted in 1830, at present consists of about four hundred members. The objects of the Society are :

1. To collect, register, and digest, and to print for the use of the members, and the public at large, in a cheap form and at certain intervals, such new, interesting, and useful facts and discoveries as the society may have in its possession, and may from time to time acquire.

2. To accumulate gradually a library of the best books on geography—a selection of the best voyages and travels—a complete collection of maps and charts, from the earliest period of rude geographical delineations to the most improved of the present time; as well as all such documents and materials as may convey the best information to persons intending to visit foreign countries ; it being of the greatest utility to a traveller to be aware, previously to his setting out, of what has been already done, and what is still wanting, in the countries he may intend to visit.

3. To procure specimens of such instruments as experience has shewn to be most useful, and best adapted to the compendious stock of a traveller, by consulting which he may make himself familiar with their use.

4. To prepare brief instructions for such as are setting out on their travels ; pointing out the parts most desirable to be visited ; the best and most practicable means of proceeding thither ; the researches most essential to make ; phenomena to be observed ; the subjects of natural history most desirable to be procured ; and to obtain all such information as may tend to the extension of our geographical knowledge. And it is hoped that the society may ultimately be enabled, from its funds, to render pecuniary assistance to such travellers as may require it, in order to facilitate the attainment of some particular object of research.

5. To correspond with similar societies that may be established in different parts of the world ; with foreign individuals engaged in geographical pursuits, and with the most intelligent British residents in the various remote settlements of the empire.

6. To open a communication with all those philosophical and literary societies with which geography is connected ; for as all are fellow-labourers in the different departments of the same vineyard, their united efforts cannot fail mutually to assist each other.

The provisional committee, in their closing address, particularly call the attention of the officers of the army, navy, &c., and of travellers, to the great importance and utility of the institution, and calculate on their support, not only as members, but as communicators of facts and information, of which the society will be the most fitting depository, and by whom they may be most beneficially promulgated. They also state, as among the objects to which their attention will be directed :

1. The composition of maps illustrative of particular branches of

geographical knowledge, more especially those relating to orology, hydrology, and geology.

2. The establishment of new divisions of the earth's surface, formed upon philosophical principles, and adapted to different departments of science; more especially as regards those divisions which are founded on physical and geological characters, on climate, and on distinctions of the human race, or of language.

3. A more uniform and systematic orthography than has hitherto been observed, in regard to the names of cities and other objects; and a more precise and copious vocabulary, than we at present possess of such objects.

4. The preparation and improvement of road-books for different countries, of gazetteers, and of geographical and statistical tables, and all such matters as are of general utility.

The ordinary meetings of the Society are held on the 1st and 3d Mondays in each month, at the rooms of the Horticultural Society. Several valuable communications have been read at the meetings which have already taken place.

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**BRITISH MUSEUM.**—It is somewhat singular that the Parliamentary returns shew, that the number of visitors to the British Museum, almost the only Institution connected with Science and Art to which the public have access without payment, should have greatly fallen off during the last few years. From Christmas 1824, to Christmas 1825, the number of persons admitted to view the Collections of Antiquities and subjects of Natural History was 127,643; from 1825 to 1826, 123,300; from 1826 to 1827, 79,191; from 1827 to 1828, 81,228; from 1828 to 1829, 68,101. The days of public admission are the Mondays, Wednesdays, and Fridays in every week, between the hours of ten and two. The Christmas, Easter, and Whitsun weeks are, however, excepted; and thus it happens, that the vacations of the officers of the Museum take place at those seasons, when the public are most disposed to relaxation. The people of London are deprived, by this arrangement, of an opportunity of acquiring information, and improving their taste, at the period when the customs of the metropolis afford them a little leisure from their ordinary employments. The number of persons frequenting the reading-room, on the other hand, has increased. That number in 1827, was 1556; in 1828, 1714; in 1829, 1758. The extent of the library, now that the King's Collection is open (although far from completeness), and the accommodations afforded to readers, would lead us to expect that the numbers would go on increasing.

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At Preston, Lancashire, the annual report of the Institution for the Diffusion of Knowledge was read at a general meeting in October last. According to this report, the members appear to be fully sensible of the advantages afforded them by the institution, and the funds are stated to be in a satisfactory state. The library contains 1,700 volumes, of which about 200, many of them of a valuable description, have been added during the last year.

One of those highly beneficial institutions, a village library, has been recently established at Ashford, Derbyshire. It is to be supported by subscription, and is intended more particularly for the use of the junior members of families; it already possesses many excellent works.

On Thursday, Oct. 1, a very numerous and highly respectable meeting was held at the Guildhall, Taunton, for the purpose of forming a Mechanics Institute in that town. The two members of parliament for the town sent 20*l.* each towards the necessary expenses, and directors were elected, and regulations agreed upon for its future management.

Richard Arkwright, Esq. has erected a new free-school at Cromford, Derbyshire, at his sole expense, for the children of that place.

Proposals have been issued for the establishment of a Philosophical Institution, and a Museum for the County of Berks, at Reading.

The cases and cabinets for the museum of the Halifax Literary and Philosophical Society are now fitting up. When completed, and the different specimens arranged, it will be one of the most perfect establishments of the kind, and cannot fail to prove both useful and attractive.

Prior Park, near Bath, a noble mansion, surrounded with park grounds of nearly 300 acres, has been purchased by Dr. Baynes, the Roman Catholic Bishop of the Bath district, and is now being converted into a Roman Catholic College. The chapel is fitting up, and a library is forming. An old tower on the summit of the grounds is to be occupied as an observatory, and adapted to scientific purposes. The new buildings, and the requisite alterations in the old, it is expected, will be completed, and the business of education will be commenced, early in the ensuing year.

A society, supported by subscription, has been formed for the benevolent purpose of endeavouring to provide a remedy against the growth and manifest ill consequences of juvenile vagrancy in and near the metropolis, where there are, as is stated, 15,000 boys who have no visible means of subsistence. The intention of the society is to provide ground, somewhere near the metropolis, where such boys may be employed, taught the elements of agriculture or horticulture, and by being subjected to moral direction and restraint, and their labour rendered productive and available to their own support, they may be rescued from the certainty of becoming miserable themselves, and burthens and nuisances to society.

#### SCOTLAND.

THE Circus Place School, Edinburgh, opened on Wednesday, Sept. 15. It is conducted on the principles of the intellectual system, as exemplified by Mr. Wood, and originated from a desire on the part of several individuals to have a school on that system for the higher classes of society. In the earlier stages of their progress, boys and girls are taught together. The school is open every Tuesday and Friday to visitors, and is liable to the inspection of the direc-

tors every day. A library of considerable extent, and a museum, are also provided for the use of the children.—*North Briton, Sept. 11.*

Mr. Donaldson, of Broughton-hall, a gentleman long connected with the Edinburgh Advertiser, whose death took place in October last, has left property to the amount, it is stated, of 220,000*l.*, to be employed in founding and endowing a hospital near Edinburgh for the support and education of orphan and destitute children.

At Kinghorn, Fife, a new school-house has been erected, which was opened on the 17th September. It comprehends an infant school-room, a common school-room, a female school-room, and a library and museum. A gymnasium for the recreation of the children, and a botanic garden for their amusement and instruction, in the intervals of leisure from study, are also being formed.

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*Note.*—In these Miscellaneous Notices it is our intention to give brief statements of the annual progress of all societies and institutions which are formed for the advancement of education; and we therefore request that the Reports of such societies and institutions may be forwarded to us. It is obvious that, if we were to attempt any abstract, in the present number, of the Reports of the past year, our information would be wanting both in variety and completeness.

THE  
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REASONS FOR ESTABLISHING A PUBLIC SYSTEM OF  
ELEMENTARY INSTRUCTION IN ENGLAND.

In our last number we gave some account of the institutions that have been established in Scotland, the United States, Prussia, Hesse, Bavaria, &c., for affording elementary instruction to the lower classes; and endeavoured, at the same time, briefly to point out the advantages that had resulted from the consequent diffusion of education in these countries. But we take leave to say, that elementary instruction is nowhere so indispensable as in England and Ireland; and yet they are now among the few civilized countries in which no public provision has been made for its supply. Not only are the means of education very deficient amongst us, but the quality of that which is afforded by the benevolent efforts of individuals is, and must unavoidably continue to be, very defective. This is much to be lamented: the state of society in England is, in many respects, peculiar, or rather, we should say, without a parallel either in ancient or modern times. Owing to the extraordinary extension of manufactures and commerce amongst us, and to the mode in which landed property is occupied, a very large proportion of our people is dependent for support on the wages of labour, and is consequently exposed to all the vicissitudes that necessarily result from so precarious a condition. Changes of policy or fashion, abroad or at home, may, at any time, deprive thousands upon thousands of our labouring population of their accustomed means of subsistence; while any serious deficiency in the harvest is sure to inflict the severest privations on the whole class. The situation of the labourers of all other countries is widely different; manufactures and commerce have made comparatively little progress amongst them; the greater number of their inhabitants are attached to the soil and depend upon it for support, so that the proportion of those liable to be thrown out of employment is comparatively small.

This peculiar state of things ought to excite the deep and earnest attention of those interested in the welfare of the country. It would be easy to show that it has many advantages, and in particular, that it is highly favourable to the progress of the arts, and gives the fullest scope to invention: but, on the other hand, it is pregnant with no inconsiderable amount of danger. The labourers are now become, from their number and their union, in the large manufacturing towns, one of the most important powers in the state, and exercise a very great influence over the deliberations and acts of government. No one who has any, even the slightest, practical acquaintance with the workings of our political system can doubt the truth of this statement; and as little can it be doubted that this power is becoming every day more formidable. Need we say more to prove that it is of the utmost importance, not only as respects the stability of our institutions, and the security of the middle and upper classes, but as respects all the best interests of the labourers themselves, that every possible effort should be made to diffuse *sound instruction*. Education may be dispensed with in other countries, but it cannot be dispensed with in England. It is not to be denied that a manufacturing population is peculiarly inflammable, and apt to be misled; and the only way to secure the labourers, as well as the other classes, from the ruinous consequences that are sure to arise from their supporting any unsound or impracticable principle, is to instruct them in their real interests.

The poor are neither fools nor knaves; they investigate all plain practical questions with quite as much sagacity and penetration as those that are rich: and were they made aware of the circumstances which really determine their condition, they would, speaking generally, be disinclined to do anything that might tend to render it worse. To suppose that it should be otherwise would be to suppose what is contradictory and absurd; it would be to suppose that they are insensible to, and careless of, their own interest! Is it not, then, the duty of all governments, but especially of the government of a country so peculiarly situated as England, to make provision for the proper education of the poor? If any one ask what has elevated the British empire to the high pitch of wealth and power she has attained, the answer is obvious, and may be made in two words—*freedom* and *security*: Freedom to engage in any sort of undertaking, and to prosecute it in one's own way, combined with the conviction, or sense of security, felt by every one, that he will be allowed to employ or dispose of his

property without molestation. Without security there can be neither riches nor civilization ; and, however far a country may have advanced, if she do not, at all hazards, maintain the security of property, she will speedily relapse into primeval barbarism and ignorance. But what is, of all others, the most effectual means of providing for this security ? Will it be best promoted by multiplying penal statutes ? by maintaining large bodies of military and police ? or by making one half the population responsible for the other ? We confidently answer, No : not that we mean to say or to insinuate that punishments, troops, police, &c. are not indispensable ; but they are not enough. The foundations of real security are beyond and above the law. Outrage and attack may and ought to be put down by prompt and adequate punishment ; but no severity of punishment, provided the circumstances in which the outrages originated be not changed, will hinder them from breaking out anew. And hence, if we would have perfect security, as perfect at least as can be obtained, we must show the people that it is for their advantage that it should be preserved inviolate ; we must prove to them—and luckily the proof is very easy—that whatever has any tendency to shake the security of property, is even more ruinous to those who depend upon wages for subsistence than to their employers. Make a labourer aware that the introduction of machinery is highly beneficial to his order—that, in fact, it has more than quintupled the demand for labour, and added prodigiously to the comforts and conveniences of every class—and, though he were the veriest clodpole that ever existed, machinery will cease to be the object of his attack. Men often traduce and calumniate their benefactors ; but they invariably do so in ignorance, and because they believe them to be their enemies ; undeceive them upon this point, and their ingratitude is immediately changed into gratitude and esteem ;—so it is with attacks on property. The Luddites and the peasantry believe that machinery is hostile to them, that it deprives them of employment, and drives them to the workhouse, and they, therefore, destroy it ; nor can anything, under such circumstances, be more natural. The law, indeed, says that machinery shall be protected, and that those who attempt its demolition shall be punished ; and no reasonable man can dispute the expediency of such a regulation. But it is obvious, as well from the nature of the thing as from what has taken place amongst us, that the threatenings of the law are not sufficient for the prevention of outrage ; and seeing, as every one does, that such is the case, is it not incumbent upon us to try what may be done by other means ?

It is all very proper to tell the labourers that they shall be sent to the gibbet or the hulks if they commit certain acts ; but would it not give weight to such tremendous denunciations, were means at the same time adopted for proving, to the conviction of the labourers, that the law is not hostile to them ; that the acts it denounces are as destructive of their interests as of those of others ; and that the security of property and the employment and continued improvement of machinery are, in fact, indispensable to the existence of the great bulk of the labouring class ? Satisfy the labourers that such is the case, and there will be no more occasion for special commissions. Not one in ten thousand can honestly exclaim *video meliora proboque, deteriora sequor !* We are inimical to whatever we believe to be injurious to ourselves, and though the laws of Draco were enacted over again, we should take the first opportunity of displaying our enmity by some overt act. The lash, and nothing else, is powerful enough to compel the slave to sluggish exertion ; but the desire to promote his own advantage is sufficient to make the freeman laborious and inventive. In like manner, penal statutes may make those who are ignorant, and who are probably misled by designing knaves, unwillingly respect, for a while, the right of property ; whereas an instructed population willingly respect it for their own sakes, and because they know it is essential to their welfare.

We have referred to the case of machinery, because of the open and multiplied attacks that have been made upon it ; but they are very ignorant indeed of what is going on around them who suppose that hostility to machinery is the only or the most dangerous delusion that is growing up amongst the labouring classes. And let no one imagine that so mighty a power can be dragooned or coerced into obedience—No ! if we would make sure of the permanent tranquillity, and by consequence of the permanent prosperity of the empire, we must address ourselves to the reason and not to the fears of the multitude ; we must show them wherein their real interest lies ; and to do this we must supply them with that of which they are now entirely destitute—a really good and useful system of instruction. We must give to the poor the means of distinguishing between their apparent and their real interests, and of detecting the pernicious sophistry of those who make it their business to delude them. Hitherto it would seem as if those who have promoted the education of the poor imagined they had done quite enough when they taught them to read and write. But though this much be indispensable, still it is certain that the education which stops

at this point is most incomplete, and may, indeed, be perverted to the very worst purposes. A knowledge of the arts of reading, writing, and arithmetic may, and frequently does, exist along with the most profound ignorance of all those things as to which it is most essential that the poor should be informed ; it opens an inlet to truth, but so does it to error and sophistry ; and it is the bounden duty of the rulers of every country, at least if they would make sure of their own safety, and provide for the welfare of their people, to take especial care, not only that the avenues to knowledge shall be opened to the poor, but that they shall be instructed in the mode of distinguishing what is true from what is false—at least in so far as their leading interests and those of society are involved. For this reason we look upon it as indispensable, that besides being instructed in the arts of reading and writing, provision should be made for instructing the labouring classes in those circumstances which have the greatest influence over their condition. They should, first of all, be made acquainted with the motives which have induced every society emerging from barbarism to establish the right of property ; and the advantages resulting from its establishment, and the necessity of maintaining it inviolate, should be clearly set forth. The sophisms of those who contend that property is instituted only for the advantage of the rich should be exposed ; for though it cannot be shown that the institution of private property has made all men rich, it may very easily be shown that it has done ten times more than all other institutions put together to produce that effect ; and that were it subverted, the rich man would very soon become poor, while he that is at present poor would become still poorer. The circumstances that give rise to those gradations of rank and fortune that actually exist ought also to be explained : it may be shown that they are as natural to society as differences of sex, of strength, or of colour ; and that though such a revolution were to take place as should overthrow all that is exalted, and establish the Spencean system on the ruins of the present order of things, the equality thus violently and unjustly brought about could not be maintained for a week ; and that infinite misery would be inflicted on society without obtaining any countervailing good whatever.

The next object should be to make the poor fully acquainted with the various benefits resulting from the employment of machinery in industrious undertakings ; and they should be shown, that though such employment may sometimes appear to lessen the demand for labour, its real

effect is *always to increase it*; and that their interests are invariably promoted by the adoption of every device that can in any way add to the powers of production.

But it is, above all, necessary that the labourers, and indeed that every class, should be acquainted with the circumstances that determine the rate of wages, or with the plain and elementary principles respecting population and the demand for labour. We certainly have no wish to extenuate the faults of the rulers of any country; but to ascribe, as so many do, all the poverty and distress abroad in the world to the agency of government, argues either the most deplorable ignorance or the most barefaced knavery. Every country has a right to be governed in the best possible manner, and we are not apologizing for erroneous political measures, which are often in the last degree injurious; still, however, there are copious sources of poverty with which governments have very little, if anything, to do; and though a country were ruled by absolute wisdom, it were vain to expect that the poor should ever entirely 'cease out of the land.' Wherever the number of labourers, as compared with the demand for their services, is redundant, wages will be low, whatever be, in other respects, the situation of such country; and wherever labour is not redundant as compared with the demand, wages will be good. The important and undoubted truth ought, therefore, to be early impressed upon the poor, that they are themselves, in a great measure, the arbiters of their own fortune; that the means of subsistence and of comfort are in their own hands; and that what others can do for them is but as the small dust of the balance compared with what they can do for themselves. Frugality and forethought are the virtues which they should be taught to cultivate; and it is principally by their cultivation that man is distinguished from the lower animals. The former teaches to husband our present means, while the latter warns us not to expose ourselves to the risk of lengthened privations hereafter for the sake of immediate gratifications. Notwithstanding no effort whatever has at any time been made to open the eyes of the poor as to what is so essential to their welfare, their natural sagacity has led them to act in the way that is most beneficial for themselves. The difficulty of providing for the wants of a family being far greater here than in America, marriages amongst us are generally deferred to a later period, and many find it expedient to lead a life of celibacy. Now if the natural and untutored sagacity of the people has made them so far control their passions, can it be doubted that this control would have been far more effective had all classes been made

fully aware of the importance of moral restraint? And to do this would not certainly be a very difficult task; it would not require any very great cogency of reasoning to convince even the most obtuse that it is their duty to provide for the support and instruction of the beings they bring into the world; and that to discharge this duty they should decline marrying until they have made some little provision against contingencies, or obtained a reasonable prospect of being able to support themselves and their families. We do not pretend that this, or indeed that any instruction would prevent all improvident unions; but it is not possible to doubt that it would have a very powerful and salutary influence.

Such are the leading subjects with respect to which it is of the last importance that the poor should be thoroughly instructed. If we show them clearly wherein their real interest consists, if education be made to embrace objects of undoubted utility, and if they be explained with that clearness, and enforced with that earnestness, which their superior importance requires, we shall have done the most that can be done to ensure the tranquillity of the country, and the prosperity of the higher as well as of the lower classes.

It has been well observed by the Bishop of Chester, in his admirable work on the 'Records of the Creation,' that, 'of all obstacles to improvement, ignorance is the most formidable, because the only true secret of assisting the poor is to make them agents in bettering their own condition, and to supply them, not with a temporary stimulus, but with a permanent energy. As fast as the standard of intelligence is raised, the poor become more and more able to co-operate in any plan proposed for their advantage, and more likely to listen to any reasonable suggestion, and more able to understand, and therefore more willing to pursue it. Hence it follows, that when gross ignorance is once removed, and right principles are introduced, a great advantage has been already gained against squalid poverty. Many avenues to an improved condition are opened to one whose faculties are enlarged and exercised: he sees his own interest more clearly, he pursues it more steadily, and he does not study immediate gratification at the expense of bitter and late repentance, or mortgage the labour of his future life without an adequate return. Indigence, therefore, will rarely be found in company with good education.'—(4th edit., vol. ii., p. 338.)

Perhaps it will be said that the subjects previously alluded to are of such a nature that they could not be made level to

the comprehension of the young, or advantageously taught in schools ; but such is not in any respect the case. The subjects in question are not half so difficult to understand as many of those branches of mathematics that are now commonly taught in the Scotch parish schools. The books for the use of scholars ought to be written in a clear, popular style, logical without the logical forms, with as little admixture as possible of scientific terms, and illustrated and rendered interesting by practical examples. At present, unfortunately, such books can hardly be said to exist; and their compilation requires talents of a very peculiar order. Surely, however, there is no labour more important, or more worthy of a really benevolent mind, than the simplification and diffusion amongst the multitude of those great truths, the knowledge of which must necessarily raise them in the scale of being, and render them better and happier. The composition of such works, though hitherto left to very inferior hands, is an act of justice which the possessors of wealth, and the votaries of science and philosophy, owe to those who relieve them from the necessity of bodily labour, and enable them to enjoy their fortunes, or to prosecute their investigations. ‘ Books,’ said Milton, ‘ are not dead things, but do contain a potency of life in them to be as active as that soul was whose progeny they are. They preserve, as in a vial, the purest efficacy and extraction of that living intellect which bred them. They are as vigorously productive as the fabulous dragon’s teeth.’ And we may add, that according to the quality of those put into the hands of the young, we may pretty confidently predict whether they will prove idle and profligate, or sober and industrious.

Since we have touched upon the subject of books, we may remark by the way, that, with the exception of the schools and schoolmasters, there is nothing that calls more loudly for improvement than the school-books of Great Britain. It is not possible to suppose that anything can be, generally speaking, more utterly worthless. Instead of manuals giving a clear and popular outline of the useful arts or sciences, the most popular of them consist, for the most part, of collections of scraps from writers in criticism and poetry. The great object at public examinations is not to ascertain the progress made in what is really useful, but to make exhibitions in the art of spouting ! The children of the poor are not made to read anything about the institution of property, the advantages of machinery, the rate of wages, or the practices of the arts in which they are to be engaged, but they are trained to mouth the soliloquies of Addison, to strut like

Dick the Apprentice, and moralize with Falstaff and Byron ! Even when, as in geography, an attempt is made to convey some useful information, nothing can be less successful. Our geographical works, from the three quartos of Pinkerton down to the puny duodecimos of yesterday, are, with very few exceptions, such as would be discreditable to the monks of Salamanca. They consist, for the most part, of long historical details, compiled in the most slovenly manner, and altogether foreign from the subject of the science, or of mere catalogues of names, strung together without principle or science, and not half so instructive as the almanacs of last century, or last year's Directory. The Kildare Street Society in Dublin has made some meritorious efforts to produce cheap and instructive books for common schools ; but these books are still very inferior to what would be produced under the encouragement of a general system of elementary instruction.

We, therefore, are clearly of opinion that it is imperative upon government to take measures for having the public provided with really useful instruction. We look upon the education of the poor as absolutely essential to the safety of the country. Ignorance in the mass of the people, and the existence of really free institutions are altogether incompatible ;—such discordant elements have invariably produced either anarchy or despotism—either the tyranny of the rabble, or of some individual who has made their ignorance the instrument of his own elevation. The poor have immense influence ; and it is not more for their own sakes than for those of others, that they should be made aware of the circumstances which fix their condition, and of the fact that their own welfare is identified with the maintenance of security and good order. Those who are ignorant are not the less ready to act, the less dogmatical in their opinions, or the less violent in their resolutions ; and hence the vital importance of sound instruction. An uneducated, or, which is far worse, an ill-educated multitude, possess no self-regulating principle, and are necessarily the willing instruments of their own prejudices or of crafty demagogues. Mobs have uniformly been violent and outrageous according to the strength of the delusions by which they have been actuated, or, in other words, to the degree of their ignorance. What other cause can be assigned for the massacres and persecutions perpetrated under pretence of advancing the interests of religion, which desolated Europe for so many ages, except that the ignorance of the people rendered them a prey to the grossest delusions of superstition and fanaticism ? Could those able and upright statesmen, the Grand Pensionary

De Witt and his unhappy brother, have met with such cruel treatment at the hands of an enlightened populace, capable of appreciating the signal services they had rendered their ungrateful country? Could the disgraceful riots of 1780, and the burning of Lord Mansfield's library, have occurred, had the lower classes in this great city been only tolerably educated? Could the detestable enormities and atrocities of the French revolution of 1789 have been perpetrated, otherwise than by the agency of a mob, whose ignorance fitted them for the commission of every crime, by rendering them the willing and unsuspecting dupes of the vilest ruffians? What but ignorance gives power to the agitators of Ireland? And what but ignorance draws recruits to the standards of 'Swing,' beats to pieces our thrashing machines, and fires our barns and houses?

It would be easy to quote innumerable other examples of the disastrous influence of ignorance on the public tranquillity and conduct of the people; but what has been already stated is more than sufficient to show that, instead of its being true, as some shallow sophists have contended, that ignorance is the surest pledge of the submission of the lower orders to established authority—it is by far the most prolific source of confusion and disorder. 'Contemplate,' said the late Mr. Whitbread, in a speech that will always do honour to his memory, 'ignorance in the hands of craft, and observe what a desperate weapon it becomes! But, how impotent is craft before an instructed and enlightened people! View the injustice and cruelty of ignorance; the violence and horrors of an infuriated mob, destroying its victims without selection or remorse—itsself ultimately the victim of its own infatuation and guilt!'

The aim and object of all public institutions either is or ought to be, to render mankind virtuous and happy. But the means most proper to produce these desirable results are learned only by experience and observation; and the grand purpose of schools and other seminaries for public instruction should be, so to instruct the pupils, so to direct the nascent passions, and so to mould the infant reason, as may best promote the welfare of individuals, and consequently of the state to which they belong. 'Albeit,' says Sir Henry Wotton, 'good laws have always been reputed the nerves or ligaments of humane society, yet are they no way comparable in their effects to the rules of good nurture; for it is in civil as it is in natural plantations, where young tender trees (though subject to the injuries of air, and the danger even of their own flexibility) would yet little want any under prop-

pings and shorings, if at first they were well fastened in the root.' (*Reliquiae Wottonianæ*, p. 78.)

Those who are anxious that the conduct of the public should, on all occasions, be dictated by sound good sense—that their judgments should be guided by principles, and not by the inflammatory harangues of those who are always ready to pander to the prejudices of their audiences—must, if they be consistent, be also anxious that they should be universally instructed. A tyrannical government, or one that has for its object to advance the interests of a few by trampling on the rights and privileges of the great majority of its subjects, must necessarily hate intelligence. A government of this sort is bottomed on force or fraud, or both ; and it must consequently dislike everything that would tend, as the diffusion of knowledge would most certainly do, to weaken the one and expose the other. But a government, animated by a spirit of patriotism, and honestly endeavouring to promote the welfare of all ranks and orders of its subjects, has nothing to fear from their intelligence, but a vast deal from their ignorance. Far from being adverse to the universal diffusion of education, to free discussion, to the most scrutinizing inquiry, such a government can hardly fail to be aware that these are her best securities. Her measures must very often be opposed to those narrow and illiberal prejudices which uniformly characterise an uneducated populace ; and could only, indeed, be safely proposed to a people that could take a comprehensive and enlightened view of their real interests.

It is truly observed by Dr. Smith, that an instructed and intelligent people are always more decent and orderly than an ignorant and stupid one. 'They feel themselves,' says he, 'each individually more respectable, and more likely to obtain the respect of their lawful superiors, and they are, therefore, more disposed to respect those superiors. They are more disposed to examine, and more capable of seeing through, the interested complaints of faction and sedition ; and they are, upon that account, less apt to be misled into any wanton or unnecessary opposition to the measures of government. In free countries, where the safety of government depends very much upon the favourable judgment which the people may form of its conduct, it must surely be of the highest importance that they should not be disposed to judge rashly or capriciously concerning it.'—(*Wealth of Nations*, vol. iii., p. 305.)

But then we shall be told that the supply of education, like that of everything else, ought to be regulated by the demand—that, if schools be really useful, they will be established

without any assistance from government, and that, to interfere in the matter, would be against all principle. This is the cant of mere pretenders to science ; and it is about the least tolerable of all cants. The fact is, there are no absolute principles with respect to this or any other subject of politics. The only question that can ever arise, is, will the proposed interference of government be productive, all things considered, of good or evil ? If the former, government is bound to interfere ; and, if the latter, it is bound not to interfere. Now, with respect to the particular case before us, there cannot be even the shadow of a doubt that, were government to interfere so far as to cause a public school to be established in every parish in England, where the fees should be moderate, and where really useful instruction should be communicated to the scholars, its interference would be in the highest degree beneficial. England has unfortunately been left, for the last thousand years, to supply herself with schools, according to the effectual demand for them ; and the astounding exhibition of ignorance and stupidity at the late trials for machine-breaking and rioting, shows how she has been supplied ! Let us, therefore, hear no more of this miserable twaddle about principle. Had the peasantry of Scotland, the United States, Prussia, Baden, Hesse, Bavaria, &c., been left to provide themselves with schools, would they have made the prodigious advances in intelligence and civilization that they have actually done ? If so, why have not the peasantry of France, Spain, and Ireland, made the same advances ?

But, as already observed, if for nothing else, government must, for its own sake, set seriously about furnishing the means of sound instruction to every one ; for otherwise it cannot be secure for a moment against the blind and dangerous impulses by which an uneducated multitude is so apt to be actuated. To render the frame of our policy secure, and at the same time to make provision for safely amending its imperfections, the people must be instructed ; they must be taught that their interests are identified with the maintenance of tranquillity, and the practice of frugality and forethought.

We shall resume this subject in an early number ; and shall then show, that, deficient and bad as the education of the lower classes most certainly is, it is still superior, relatively to their condition, to that of the higher classes—to those from among whom our senators, judges, and magistrates are chosen.

## EDUCATION IN SPAIN.

BEING about to present our readers with an account of education in Spain, we feel bound to apologize for the necessity of beginning by a more retrospective view than would be allowable in a similar sketch of any other system of public instruction. The present state of Spanish education would excite no interest, without some knowledge of the protracted struggle kept up in that unhappy country by the contradictory desire of its authorities to maintain a national reputation for knowledge, and to stunt the growth of that knowledge to the shape and dimensions of their plan of Church and State.

It is, indeed, a merciful provision for the gradual progress of the human mind, that very few among the numerous and powerful opponents of that progress have been fully aware of the only measure which can accomplish their purpose, or have had the hardihood necessary to apply it successfully. Not unlike religious persecution (with which the desire to confine the mind of man within artificial limits is inseparably connected), the subjection of a whole people to a certain mental standard demands an unfeelingness so stern, so remorseless, so perfectly indifferent to national fame, that it seems perfectly incompatible with the European character. No Christian government has approached so nearly as the Spanish to the temper required for this diabolical task. But whilst bigotry steeled it against every impression of mercy in regard to religious dissenters, pride made it blush at the idea of national ignorance; ambition turned its thoughts to the means of rivalling other countries; and growing poverty forced it into communication with strangers. Now, he that would derive undisturbed sway from the ignorance of a nation, should beware of tampering with knowledge. Like Mahomet, he should close every avenue to the light of reason, and bring up his people in the most unhesitating belief that *to think* is degrading, hateful, impious. Heaven, however, though it allows Spain to linger, age after age, in the twilight of mental improvement, seems to have decreed that it shall not sink into the repose of utter darkness. The geographical position of the Peninsula; the commercial intercourse on which its prosperity depends; the near alliance of Spanish with Latin, Italian, and French; the pride of the Castilian kings, who inherit the claim of figuring in the first ranks of the European community,—are openings to knowledge from abroad which no human power can close.

But nothing is so curious as the instrumentality of the Spanish clergy in preserving the seeds of knowledge among a people whose mental improvement they have most lamentably thwarted. It is a well-known fact, that the noblest establishments for the promotion of learning in Spain have originated in the liberality of ecclesiastics. As soon as the arms of the Christians had driven the Moors beyond the frontiers of Castille, early in the thirteenth century, Don Rodrigo, Archbishop of Santiago, author of a Spanish chronicle, induced Alfonso VIII. to establish the University of Palencia, which, a few years after, was transferred to Salamanca by St. Ferdinand. The ignorance of the Spaniards who lived out of the dominions of the Arabs must have been deplorable at the time when this first effort in favour of education was made. From a passage of Don Enrique de Villena, who flourished at the end of the fourteenth century, it appears that the Castilians had lost all knowledge of the alphabet : the restoration of this knowledge (according to the same writer) was effected by masters from England. The passage at the bottom of the page, which we copy from Mayans, is deficient in dates and other particulars ; but the marriage of Alfonso VIII. with Eleonor, daughter of our Henry II., seems both to explain why Englishmen were the appointed teachers, and to connect this fact with the period of the foundation of the first Spanish university. The latter means of instruction must have been intended for the secular clergy ; the more elementary teachers for the laity\*.

It does not appear that public education made any progress in Spain, or that any new establishments for public teaching were instituted, till 1420. About that year a college was founded under remarkable circumstances. A state of incessant warfare, either against the Mahometans, or among the Spaniards themselves, could not allow the leisure and secu-

\* ‘Despues recogidos los Christianos en el Monte Sacro en Asturias, é perdieron los saberes entre ellos y aun el escribir y leer por diuturnidad de tiempo. Desque fueron conquistando sintieron la mengua de la perdida letra, é embiaron a la Isla de Inglaterra por maestros que tuviessen escuela de escribir, é leer, é gramática ; é mostraronles un tal alfabeto. Llamaronla *Letra Anglicana*, é decian a la H *Aque* (read *Ach*). Pero los de este reyno no podian pronunciar sino *Ach*.’ —Villena ap. *Mayans, Origenes de la Lengua Castellana*, vol. ii., p. 331.—‘When the Christians had confined themselves to the *Monte Sacro* in Asturias, all kinds of knowledge, and even that of reading and writing, were lost among them for a great length of time. But as they extended their conquests, they felt the want of the lost alphabet, and sent to the Island of England for masters, who should open schools of reading, writing, and grammar. These men taught the desired alphabet : it was called the *Anglican Letters*, and they (the masters) called the H *ach*; but the natives of this kingdom could not pronounce it otherwise than *Achè*.’

rity which public education requires : hence the curious fact of a Spanish college founded abroad. The very troubles and feuds which drove the Archbishop of Toledo, afterwards Cardinal Albornoz, out of his native country, induced him to found at Bologna the still existing college of *San Clemente degli Spagnuoli*. It was after the plan of this splendid foundation that most of the Spanish colleges were founded at a subsequent period. The College of Bologna was opened for thirty-five fellows and chaplains, all natives of Spain, who were to return to their country after a residence of eight or nine years. Many of these students rose to the first dignities of the Spanish church. Precluded as they were by their profession from the ties of marriage, some of the most eminent among them took a pride in the foundation of literary establishments, upon the model of that to which they owed their wealth, and probably the happiest period of their life. Many others followed this example ; and Spain was amply supplied with places of education in the course of the sixteenth century. Hence the number of Spanish universities, of which we have not the means of giving a complete list. The following, collected from memory, and without any attempt at arrangement, will not be found very inaccurate :— Salamanca, Alcalà de Henares, Cuenca, Osma, Valencia, Orihuela, Osuna, Zaragoza, Huesca, Seville, Granada, Palma in Majorca, Oviedo, Valladolid, Sigüenza, Santiago.

Many other literary establishments of the same kind might be mentioned in proof of the munificent zeal of the clergy ; such as the episcopal seminaries, where young men intended for orders are educated, in some large towns where a university does not exist \*.

But, before we proceed, a few remarks on the sources and tendency of this zeal will, perhaps, not be thought irrelevant. In a journal of education, anything that may throw light on the general helps on which its friends may rely, or the dangers against which they must watch,—any facts which may expose the selfish motives which are apt to disguise real opposition to mental progress, under the cloak of zeal for public instruction,—cannot be without some value.

Without attempting to unravel the complex designs of Providence, every attentive observer may discover, in the

\* It may appear strange that these seminaries should often be founded at a short distance from places where there is a university. But the reason of this will appear, on considering that the Spanish universities do not afford accommodations for the residence of the under-graduates, who, on that account, live in lodgings under no superintendence, and consequently exposed to many moral dangers. Hence the Spanish universities are frequented almost exclusively by the youth of their own town and neighbourhood.

circumstances which attended the early propagation of Christianity, a remarkable provision against the natural tendency of all hierarchies to limit and monopolize knowledge. A priesthood, in alliance with a conquering power which subdues a timid race, can easily secure to the sacerdotal class the exclusive privilege of possessing and directing that kind of knowledge which can best support their power and their vanity. But the primitive ministers of the Gospel, having no political assistance in their arduous task of subverting the religion of an enlightened empire, far from being tempted to lay the foundations of an aristocracy of learning, had every inducement to increase their influence, by gradually endeavouring to show themselves not totally unworthy of being reckoned among the lettered class of the Roman people. In the West we accordingly find the most distinguished of the clergy anxious to obtain the praise of eloquence; in the East, that of philosophy—just as the established taste gave a preference to the one or the other. It is true that the *Roman* clergy, probably discouraged by the mass of talent collected in the capital, could not boast of a tolerable writer till the fourth century, and had to oppose the eloquence and learning of their much superior brethren of Africa, by a boldness and policy in which we may recognize the political school of the imperial city. As pagan Rome declined, some of the Christian clergy dared to covet the palm of literature which had dropped from the palsied hands of their opponents; but the attempt required an attentive study of those glorious literary monuments, whose language was still, in a great degree, vernacular. Thus Lactantius obtained the name of the Christian Cicero; and thus did Jerome approach the Augustan style for which he desperately contended\*, in spite of a natural bad taste and a truly monkish mind. Similar to this, though more frequent, was the literary praise claimed by members of the Greek Church, one of whose most distinguished saints† did not recoil from the moral pollutions of Aristophanes, for the sake of the purity of his Attic dialect.

Thus the two main branches of the Christian Church, by being inseparably connected with the two most cultivated languages in the world, were destined to preserve, through the freezing darkness of the middle ages, the seeds of knowledge and taste which were to spring up at the appointed period. Gladly, indeed, would the Christian Clergy have

\* His vision of angels flogging him for reading Cicero too assiduously is well known.

† St. Chrysostom.

limited the use of literature to their professional objects ; or totally smothered it when they perceived the danger to which it must expose what they called *the Church*. Gregory the Great would have extinguished the very embers of classical learning, if, in spite of the fast setting ignorance of the sixth century, there had not been individuals who preferred Cicero's *Offices* to his *Morals*, and the miracles told by Livy to those contained in the good Pope's Dialogues.

The leaders of the Roman Church have seen more than once the danger of encouraging the cultivation of the two learned languages to which Christianity secured perpetuity ; but—

' Nec tecum possum vivere, nec sine te '

may well be applied to ancient literature and that Church.

The influence of the clergy had become dependent on a kind of knowledge which could not but grow dangerous to that very influence. Whatever might be the prevalent corruption of taste, a connexion with its truest standard was preserved by the two languages of the Christian sanctuary. As both the eastern and the western Church had borrowed the weapons of philosophy, and couched their professions of faith in the technical language of the Academy and the Lyceum, metaphysical studies could never be relinquished by either. The spirit of the School Philosophy and School Divinity, which attained its full growth in the thirteenth century, had existed among the clergy from the earliest times, producing in every subsequent period an increase of that restless mental activity which could not fail in the end to break down the best contrived church barriers. Yet some from policy, some from sheer blindness, and all from an instinctive perception of the dependence of their class on literature, the influential clergy of the Church of Rome have at all times been great promoters of learning. Rome, whose policy always threw the weight of her authority into the scale of the disputants who maintained the most popular doctrines, increased the confidence of the orthodox into a feeling of perfect security, and a firm expectation of triumph against every new doctrine to which the School disputations might give birth. To raise, therefore, everywhere a phalanx of such divines as the University of Paris had hitherto produced, became an object of holy ambition among the wealthy churchmen of every country.

But this zeal for the promotion of learning among the clergy knew no bounds when the study of Roman law began to flourish under the patronage of the lay powers. It was not, indeed, in the character of the Papal Church to allow this secular branch of learning to flourish without a counterpoise on the side of the clergy. The court of Rome could not behold without alarm the schools of Bologna, Modena, and

Mantua, crowded by law students, whose reputation, as a new literary class, would soon obscure that of her body of divines. To obviate this danger, a digest of ecclesiastical law was soon contrived in imitation of the Justinian Pandects, and professors of this new science, called Canon Law, were established wherever the Roman law was studied. The notion that no lawyer could arrive at excellence in his profession without devoting his attention both to the civil and the ecclesiastical code, was also studiously propagated, in order that no branch of professional education should flourish unconnected with the Church.

In regard to Spain, it is surprising how much the original connexion of its universities with Bologna has contributed to the enormous influence of the court of Rome over that unhappy country. When we look on its colleges and universities under this impression, it is difficult to define and analyze the sentiment which the memory of their founders calls forth. To deny them every kind of praise because they chiefly had in view the permanency of their church, would be to judge them with a severity little in accordance with true philosophical candour ; but it would be absurd, on the other hand, so to respect their ignorance, their prejudices, and their passions, as not to wish most cordially for the final overthrow of the plans and means which they contrived in order to keep the human mind within their narrow, tortuous, and degrading track of knowledge. The utmost that equity demands is, that we should so pity, excuse, and respect their memory as to hope that, had they lived in our times, they would have joined the ranks of those who take a disinterested love of truth for their only guide. It is a very absurd feeling to consider the founders of public establishments as defrauded by posterity, when the erroneous views under which they made their bequests are disregarded. The history of the world stands as a solemn protest against all attempts to bind by gifts future generations to that which in their opinion shall be found contrary to the general interest. Could it ever be proved that the munificence of any individual was intended to act as a perpetual bar to the progress of the human mind, his memory should be held in abhorrence : ‘ thy money perish with thee’ would not be too severe an answer to the proffer of such gifts.

The system of education pursued by the Spanish universities, though never very active or powerful, has unfortunately continued true to the views of its founders, and offered an effectual resistance to the mental improvement of the country. The general impulse felt by the European mind from an early part of the fifteenth century had hardly reached Spain in the

beginning of the sixteenth, when it was opposed by church and government with the most relentless rigour. The study of the ancient languages, which Cardinal Ximenes had begun to encourage by the compilation of his Polyglot, became strongly suspected of heretical tendency as soon as criticism was found to be ranged on the side of the Reformers. The universities of Spain were about to reap the benefits of classical instruction from such men as Brocensis and other Spaniards who had imported from abroad large stores of genuine knowledge; when the new-modelled Inquisition marked them all as objects of persecution. It has been said that the readiest way to collect a list of the best works ever published is to consult the Index of the Inquisition: we might well add, that to learn the names of the best Spanish scholars we should go to the list of persons who have inhabited the dungeons of the Holy Tribunal, or been kept for years under the constant apprehension of being made their tenants.

This jealousy arose almost simultaneously with the institution of the Jesuits, who soon spread themselves over the native country of their founder, offering gratuitous education to the Spanish youth. With their peculiar facility of accommodation to circumstances, the Jesuits adapted their system of studies in Spain to the spirit of its government, and to the real views of the Popes, whose sworn subjects they were, more than any other religious order. In Italy and France they carefully reared some men whom they might keep in the eye of the public as candidates for the highest honours in taste and ancient learning; and even the mathematical sciences were successfully cultivated by Jesuits abroad. But their labours in Spain were confined to the compilation of ponderous works on divinity, to the obscure yet influential service of the confessional, popular preaching, and writing books of devotion and mystic theology. Whoever takes the trouble of consulting the notices of Spanish Jesuits in Nicolas Antonio, will find that all their young men of talent were sent to pursue their studies at Paris, Louvain, or Rome. It was abroad that they employed such men in obtaining fame for the whole order: in Spain that fame would have been dangerous.

The Jesuits' schools were numerously attended by the Spanish youth. As Latin was taught in those schools *gratis*, and as a slight acquaintance with that language has always been considered among Spaniards as the distinguishing mark of an educated layman, many gentlemen, and not a few among the lower classes, sent their children to be instructed by the Jesuits. Yet a critical knowledge of the Roman classics grew every day more and more rare in Spain.

Latinity was at a very low ebb among the Spaniards during the greatest part of the last two centuries, and Greek almost totally unknown.

The Jesuits' schools of Aristotelian philosophy were also much frequented in Spain. It was, indeed, the custom to attend their schools for serious study, and those of the universities for form's sake. Persons who wished to qualify themselves as lawyers and physicians attended the university lectures. But it is impossible to conceive the wretched state of the studies pursued under the university professors, till within the last forty or fifty years. The study of Roman law was carried on without the least acquaintance with Roman history ; while that of canon law proceeded on the most unsuspecting acceptance of the forgeries contained in the Papal code. Medicine was made a mere branch of school metaphysics, and divinity an arena for the display of scholastic jargon. Syllogistic disputations were the only method of acquiring and displaying professional knowledge. To deviate from the established routine—to aim at any knowledge but that of the public schools—was reckoned a proof of eccentricity in those who were fortunate enough to escape a more serious suspicion.

The accession of the Bourbon family was, however, favourable upon the whole to Spanish learning and literature. But no effectual reform in the system of education took place till the Jesuits were expelled in 1767. Three years after that important measure, the Marquis de Roda, who had effected the expulsion, exerted his influence, as minister of Charles III., in the reform of the Spanish universities, known as the *Plan de Estudios*, which, but slightly modified, continues in force to this day. We ground the details and observations which are to follow chiefly on the experience of a gentleman who, little more than twenty years ago, was thoroughly conversant with the whole system.

There are few establishments in Spain for the diffusion of the first rudiments of knowledge. The lower classes seldom learn to read and write : those above them are as seldom instructed in any thing but those two accomplishments and the elements of arithmetic. Such as are intended for the learned professions attend a Latin school for three or four years. Since the expulsion of the Jesuits these schools are not numerous. Some private establishments, for the instruction of boys in Latin, were rising at the time of the French invasion, and a desire of improvement in the method of teaching was showing itself among the teachers. It seems that many more of these private schools have been opened since that time ; but classical knowledge has made little or no progress.

The branches of knowledge taught in the Spanish universities are—1. Philosophy, including Logic, Physics, and Metaphysics. 2. Theology. 3. Roman Law. 4. Canon Law. 5. Medicine. The scholastic year begins in October and ends in May, with no interruption but that of a few holidays at Christmas and Passion-week. During this long term every student is obliged to attend one lecture in the morning and another in the afternoon. Attendance is strictly enforced, though, as the students live dispersed throughout the town, they have sometimes to walk a considerable distance twice a day. The loss of time with which this regulation might be charged at first sight is compensated by the advantage of keeping the idle out of mischief, and forcing the studious to take exercise.

The usual age for matriculation is between fourteen and fifteen. No student can proceed to any of the higher faculties without two years' attendance, at the least, in the philosophy schools. The first of these two years is devoted to logic; the second to the elements of natural philosophy, and such a slight knowledge of geometry as is necessary to understand the general laws of motion, and some theorems of mechanics. At the end of these two years, the examination for the degree of bachelor of arts takes place. The trial consists in questions put by the professors on the above-mentioned subjects. These examinations take place publicly, in the presence of the head of the establishment, called the *Rector*.

In the original plan of studies, attendance for another year in the class of moral philosophy was required of every one who intended to study law; and a similar attendance in the class of metaphysics on the part of those who wished to take the degree of master of arts. But the study of moral philosophy, for which in some universities was substituted what may be called *natural and international law*, became an object of suspicion to the government in consequence of the French revolution, and the professorship of moral philosophy was suppressed. A dispensation of the third year of philosophy, as it was called, was easily obtained from government.

Few, comparatively, took the degree of master of arts, both because the previous examination, or degree of licentiate, was severe, and on account of the expense, which was considerable. The present statement, however, applies chiefly to the universities of Seville and Osuna. Local customs produced some variety on these and similar points in other places. Thus, for instance, masters of arts had no vote in convocation at Granada. Again, the examination for a licentiate's degree in arts at Osuna was entirely freed from the scholastic forms, which, in spite of the new plan of studies,

were still preserved in most universities. But it would be useless to enter into minute details. The class-book for the study of philosophy was the work of an Italian monk, named *Altieri*.

The study of divinity takes up five scholastic years. The first is employed on the work of Melchior Canus, *De Locis Theologicis*, which is considered as an introduction to all other branches of the sacred science. Four years more must be employed in the attendance at lectures, morning and afternoon, on *dogmatic*, *moral*, and *expository* divinity. The students are often practised in those displays of knowledge, and skill in disputation, which are the established tests of proficiency for the higher degrees at the public trials, by which some of the best pieces of church preferment are obtained all over the kingdom. As this is a subject intimately connected with the plan of the Spanish universities, it will be proper to notice it here.

Whenever the comparative knowledge of several persons is to be tried in a public competition, or the claims of one individual to the honour of a high degree are to be ascertained, the following method is generally employed:—The candidate is to choose one out of three subjects offered him by lot, upon which he must lecture in Latin for one whole hour the next day, and answer, extempore, the objections of his opponents. These subjects (called *puntos*, i. e. points) are taken from the works which the deeply-rooted prejudices of the country hold still as the foundation of each of the faculties recognized in the universities. Proficiency in arts, i. e. philosophy, is generally tried by lectures on the Organon and Physics of Aristotle; in divinity, on the master of the Sentences, Petrus Lombardus; in Roman law, on the Pandects of Justinian; in canon law, on the Decretum of Gratianus; in medicine, on the Aphorisms of Hippocrates. These exercises are as fatiguing as they are inappropriate to the state of knowledge which was contemplated in the plan of the reform of studies. The truth is, that even the absolute power of the Spanish government was inadequate to bring about a substantial change in the universities.

This difficulty was fully perceived by the principal movers of the reform—Roda, and his friend Campomanes. Supported by a small number of enlightened men, their next attempt was to create what might be termed an *unprofessional* knowledge in the country, in order to make it work against monkish learning. The character of these views shows itself under a certain degree of cautious reserve, in the works of Campomanes, which appeared about the year 1774. His *Discursos sobre el fomento de la industria y la*

*educacion popular* contain a variety of observations on political economy and the diffusion of useful knowledge, which, though frequently erroneous, especially on commercial subjects, evince a powerful mind stored with information, and deeply impressed with the degraded state of his priest-ridden country.

Campomanes and his friends did not confine themselves to mere speculations on these points. By means of their official influence at court, they procured a royal decree for the establishment of *Sociedades Patrioticas* (Patriotic Societies) in all the principal towns of Spain. The gentry and the secular clergy were invited to join in the formation of these bodies, whose object was to be the promotion of agricultural knowledge, the encouragement of manufacturing industry, the establishment of elementary schools, the improvement of those already established, the collection of funds for endowing a professorship of mathematics, and an academy for the study of drawing and the fine arts, in each of the head towns of the provinces.

The effect of these societies would have been great and rapid had not the alarm produced by the French revolution induced the original promoters of this plan to oppose the impulse which they themselves had given. Orders were sent to the Inquisition to exert its vigilance against the spread of the new political doctrines, and not to spare the party to whom a taste for mental pursuits, not in accordance with the scholastic system, had procured the name of *ilustrados* (the enlightened.)

The effects of this sudden change were soon visible in all the principal towns. Those persons who had been lately employed to assist in Roda's reform were given up to persecution. The periodical works\* set up at Madrid, with the object of dispelling popular superstition, and ridiculing the jargon of the universities, were stopped. The whole army of monks was roused into exertion, and urged, by a royal order, to preach against modern philosophers—a broad designation, which brought into danger all but the monks and their friends. These measures could not but spread dismay among the few, who in some of the universities, and especially at Salamanca, had seconded the plan of literary reform, and kept the bigots in check for a time. Some were subjected to long prosecutions and imprisonment by the Inquisition, and all were made to live for years under its terrors. But, in spite of fear and danger, such Spaniards as had tasted the forbidden fruit—that kind of knowledge which ‘comes

\* *El Censor*; *El Apologista Universal*; *El Pensador*.

home to the bosoms and business of men'—could no longer relish the dry, unsubstantial chaff of the schools. The new taste for science and philosophical speculation continued to gain proselytes, especially among the lawyers. Even the lay gentry felt a desire for instruction. The peace with France in 1795 changed the domestic policy of the Spanish government, and fresh attempts at mental improvement were supported by the Prince of the Peace. But as no department of knowledge, directly connected with the moral relations of man, could be cultivated without danger to the church and state, the main progress of Spain was almost confined to pure science. A practical instance, in regard to mathematics, will illustrate this fact.

The knowledge of mathematics, as a science, had become quite extinct at Seville, when, about the year 1787, the Patriotic Society provided a small fund for the establishment of a mathematical school. M. Pierre Henri, a French mathematician, whose zeal for the propagation of his favourite science amounted to real enthusiasm, offered himself for the intended professorship. Living in contented poverty, he considered the rapid progress of *two* of his pupils as an adequate reward for his labour. Unfortunately for his studious repose, the execution of the king of France was the signal for a most shameful persecution of all Frenchmen resident in Spain : the local magistrates imprisoned every one from whom they could obtain a sum of money ; and to cover their extortions under the veil of loyalty, did not spare those whose poverty might otherwise have been their protection. Henri was among the latter ;—confined in a dungeon during the whole period of the Spanish war with Republican France, he asked for no other relief or indulgence than pen, ink, and paper, and a cell with sufficient light to employ himself in the composition of a Treatise on Mechanics, in which he was engaged at the time of his imprisonment. The peace of 1795 stopped this cruel treatment ; but Henri had contracted a dropsy, which terminated his life a few days after his liberation. After Henri's death, one of his pupils succeeded him in the professorship, whilst the most eminent of those he had instructed gave private lectures about the town. The number of mathematical students was but small at first ; yet as the Patriotic Society held a public examination in which annual testimonials, consisting of a few books, were awarded to proficients in elementary mathematics, even this slight encouragement was enough to inspire some young men of family and wealth with a desire of scientific distinction. The vicissitudes of Spain during the last twenty years do not

seem to have checked this spirit of mental improvement : during the existence of the Cortes, the *old Patriotic Societies* resumed their labours with revived and unshackled energies ; and such is at present the number of mathematical students in Spain, that a complete 'Course of Mathematics,' published by *Don Alberto Lista*, Henri's most distinguished pupil, and a man whose various and profound knowledge would do honour to the most enlightened countries in Europe, has been purchased by the Spanish booksellers for a sum which secures a subsistence to its author.

We shall finish this sketch with a summary view of the present state of education in Spain, and a conjectural estimate of its prospects.

It is a melancholy consideration, that the mental improvement of Spain is essentially at variance with the whole frame of society in that unhappy country, and it must either destroy or be destroyed. The question whether the reform, begun in 1770, could have been so contrived that it should gradually modify and improve the old institutions, is a difficult one ; but we feel a strong conviction that the promoters of that scheme overlooked the only means which had a chance of producing a beneficial change. Had they promoted classical studies in the first place, instead of beginning by science ; had they required an examination in ancient literature for the degrees in arts, and gradually raised the standard of scholarship necessary for the highest honours in that faculty, it is probable that the universities, instead of being one of the great obstacles to Spanish improvement, would, by this time, have cordially joined in promoting it. We are very far indeed from advocating the *exclusive* use of classical literature for the purpose of education ; or of recommending that study in the same degree under all circumstances ; but the literary institutions of Spain were just in a state which left no alternative but that of ameliorating them by studies directly connected with their system and nature, or taking a remote chance of their destruction after a fierce and protracted struggle with a rival knowledge. By the encouragement of scholarship in the universities themselves, the fear of innovation and hostility to the established learning would have been much allayed. The clergy, if directed again to those studies, which, from their intimate alliance with the moral and social tendencies of the mind, have very properly been called *humanities*, would probably have become instrumental in the important work of removing from theology that crust of scholastic barbarism which makes it impervious to reform. Ancient literature was considered, in the original plan of the

Spanish universities, as the foundation of all other knowledge. At Salamanca, lately the head-quarters of scholasticism, a college, called the *Trilingue*, had been founded at an early period, for the study of Latin, Greek, and Hebrew. There are still professorships of Greek at Madrid, Valencia, and some other places. Yet these establishments were totally neglected. The truth is, the reformers of Spanish education had been brought up in the French school of the time of Louis XV., and they neither possessed nor valued a classical taste. In their impatience to oppose the scholastic jargon of the universities, they thought only of establishments totally unconnected with those ancient bodies: unable to put them down at once, they endeavoured to create a taste, especially among the gentry, which might in due time bring the Universities and their learning into utter contempt. Colleges for the education of the *noblesse* (*seminarios de nobles*), and military schools for the youth of the same class, who wished to enter the army and navy, were established in various parts of the country \*. These and a few other schools, on the same plan of opposition to classical and professional learning, have already spread among a great portion of the better classes, not indeed the useful knowledge of physical and political science, but a flippant contempt of all other studies. The love of reading has, indeed, wonderfully increased; but it is a reading which must add to the evils we are lamenting. In proportion as a certain knowledge of French has of late become a common acquisition in Spain, books in that language have been diffused over the Peninsula. As most of this reading takes place by stealth, and without guidance, those works are naturally preferred which, without demanding the labour of reflection, impress the mind with a delusive consciousness of suddenly acquired knowledge. Every one who has reflected upon these subjects is aware that this delusion is most readily produced by that kind of philosophy which, to borrow a well-known logical word, we may call *destructive*. We do not use the term in the spirit of invective, nor do we mean to deny that where an essentially wrong system has long prevailed, a strong sense of its errors must be the first step towards reform: we wish only to draw the attention of our readers to the natural effects of the principles in question, when acting without counterpoise; and to point out their tendency to produce a superficial character, incapable of patient investigation, rash in inference, despondent in diffi-

\* Vergara, Cadiz, Madrid, Ferrol, Segovia.

culties, and ready to settle into a sardonic laugh as the ultimate result of all moral and political inquiries.

The system of Spanish education must, therefore, year after year, widen the breach which already divides that country into two parties perfectly irreconcileable with each other. The struggle which threatens to exhaust the vitals of Spain is neither of the poor against the rich, nor of the gentry against the nobility and the court: it is a contest arising from *mental antipathy*, entirely produced by the opposition of the *established* education and that which, supported by the ill-contrived reforms already mentioned, every Spaniard endowed with an active mind more or less gives to himself. The mutual hatred of the two classes of Spaniards thus opposed cannot be well conceived without a thorough knowledge of their respective circumstances. In possession of wealth and honours, the clergy (those, we mean, who are sincere bigots) consider their influence and privileges as inseparably connected with the glory of heaven and their country. Around this compact nucleus are ranged the ignorant and superstitious—a prodigious mass, whose mental pride knows no gratification but that of extorting respect for what they themselves revere. In ill-disguised yet unavowed opposition to this formidable phalanx stand a daily growing body, composed of people of all ranks and professions, who, whatever may be their want of sound information in other things, yet are quite able to estimate the worthlessness and mischievousness of their adversaries' knowledge. It cannot, however, be denied that whatever talent and real information exists in the country is unquestionably on this side. Elated by this consciousness, and galled by the sad necessity of vailing to those whom they despise, the *liberal* party cannot conceal their supreme contempt of the bigots—an offence which dignified ignorance will bitterly resent even in a state of security, but much more when it feels itself in danger.

If either of these parties were powerful enough to subjugate the other, the mental fever of the country would be less violent, and some crisis might be expected at no distant period; but neither can the Church nor the *Liberals* (for these are really the two contending parties) have the most distant prospect of disarming their adversaries. The contest unfortunately must continue for an indefinite period, during which the two rival systems of education which exist in that country must carry on the work of making one-half of the population strangers, foreigners, and enemies to the other.

### THE SCHOOL OF ATHENS DURING THE DECLINE OF THE ROMAN EMPIRE.

THE main design of this article is to exhibit a view of the state of education at Athens in the fourth century of the Christian era. Our motive for selecting Athens from the countless number of great and flourishing cities contained at this period in the Roman empire for the subject of our inquiries, is simply, that the same causes which rendered it the most celebrated seat and nursery of arts and learning in the ancient world, have likewise afforded us means of collecting more circumstantial information concerning this part of its history than we can obtain with regard to other places, which may have equalled or surpassed it in size and splendour, but were inferior to it in literary renown. It is in some degree from a like motive that we propose to dwell more particularly on the period above-mentioned; it being one about which we happen to possess more minute and interesting details on education than any other period supplies. The century, however, to which we are thus accidentally directed, is that which would otherwise have engaged our peculiar attention, as the last in which the ancient studies, that enabled the glory of Athens to survive its freedom, maintained an equal struggle against the new religion that was at this time crushing the old faith out of which they had grown, which for a time they supported, and with which they sank, fell, and perished.

The ultimate end of this sketch is to illustrate the general condition of education in the Roman world under the emperors. And it is more especially to avoid the appearance of aiming at anything like a complete history or description of a field so vast and varied, that we have laid down, at the outset, a precise limit of time and space: but since we have a general as well as a particular object in view, we shall not confine ourselves so closely to the latter as to abstain from all excursions into other regions, by which we may be able to throw light on the former. We are about to consider Athens as a high school or university, open to all the youth of the Roman empire. But before we attempt to survey its internal character and economy, we shall take a brief retrospect of the causes that affected its outward prosperity, and examine the relation in which it stood to other seats of learning, the encouragement afforded by the government to certain kinds of instruction, and the relative rank which the several branches of education held in public esteem.

The celebrated embassy sent by the Athenians to plead their cause at Rome, a short time before Greece was reduced to a Roman province, consisting of the three most eminent philosophers of the age, the Stoic Diogenes, the Peripatetic Critolaus, and Carneades, the founder of the third Academy, found a strong party among the great families at Rome warmly prepossessed in favour of Grecian literature, and ready to do full justice to their various talents and accomplishments. We may gather from Cicero's account of the mission (*De Orat. ii. 37*), that the Athenians had received previous intimation that they could not select representatives more agreeable to their powerful patrons. We also perceive that the operation of this event was by no means confined to the effect of diffusing among the educated Romans a more general knowledge of the Greek philosophy. The envoys, while they explained and defended the tenets of their respective schools, also gratified the curiosity of their hearers by exhibiting specimens, all excellent in their kind, of the different rhetorical styles, by which each sect was distinguished little less than by its philosophical doctrines. The sententious brevity and dialectic subtlety of the Stoic,—the exuberant copiousness and equable flow of the Peripatetic,—and the brilliance, the energy, the versatility and dexterity of Carneades, who delighted in shifting his side, and showing that he could make every cause equally probable, afforded contrasts new to most ears, and in which every taste found something to relish and admire. Notwithstanding the strenuous opposition of the Romans of the old school, headed by Cato the Censor, who is said to have been particularly scandalized at hearing Carneades take up the cause of justice one day, and the next maintain that of injustice with equal force of argument, this visit contributed much to establish the ascendancy of Greek literature at Rome. It became, from this time, more and more an indispensable branch of education for the higher classes of society, and particularly for all who chose the forum as their road to wealth and honours. The demand for instruction in the Greek language and letters, however, was amply supplied by the Greeks who settled at Rome, and either opened schools of grammar and rhetoric there, or found employment in some wealthy family. With this the Romans appear to have been usually contented, and it seems never to have been very common to send a young man for education to a Greek city: nor, when this was the case, was Athens always preferred. Marseilles, as we learn from Tacitus (*Agricola, c. iv.*), was recommended for this purpose by a happy temperament of Grecian refinement and pro-

vincial simplicity of manners. A similar inducement may frequently have dictated the choice of Apollonia, to which Augustus was sent by his great-uncle, the dictator, to pursue his studies: it is distinguished by Strabo as a most orderly city. It seems, moreover, that in the time of Cicero, the Romans, who sought instruction at Athens, resorted thither rather as to a school of philosophy than of eloquence. The taste of the literary public was divided between two styles of composition, which Cicero designates as the Attic and the Asiatic. The former, dry and nervous, may have prevailed at Athens; at all events the latter, which inclined to a vicious redundancy, was long cultivated in the cities of Asia Minor, and, in a more moderate degree at least, at Rhodes. This appears to have been the more popular among the Romans. Cicero's great rival, Hortensius, was entirely addicted to it; and Cicero, whose favourite master was a native of Alabanda in Caria, who had settled himself at Rhodes, was strongly biassed the same way in his youth. Accordingly, in the tour which Cicero made to Greece for improvement at the beginning of his forensic career, he devoted the time he spent at Athens almost entirely to philosophy, and then crossed over to Asia to study rhetoric under the guidance of the Asiatic orators, who, in his judgment, numbered among them the most eloquent men of the day (*Brutus*. 91).

The Asiatic cities, however, did not continue long to dispute the pre-eminence of Athens as a place of literary education. When the triumph of Augustus had united the Roman world under the peaceful dominion of a single master, the intercourse between the eastern and western provinces of the empire, which till then had been interrupted by political events, became more active and regular. The ambitious and studious youth of the remote districts who wished to get rid of a provincial dialect and accent, and to draw from the purest source of the Greek language and learning, resorted chiefly to Athens. Strabo, writing in the early part of the reign of Tiberius, dwells at some length on the flourishing state of the school of Tarsus in Cilicia; he asserts that its inhabitants surpass both Athens and Alexandria, and every other place he knows, in the ardour with which they cultivate philosophy and all other ordinary liberal studies. But he remarks that there was this difference between Tarsus and the other cities he mentions:—At Tarsus the students were almost entirely natives of the place; few strangers resorted thither, and even the citizens commonly travelled to complete their education elsewhere; whereas with the other cities he has named (which are only Athens and Alexandria), the

reverse is the case : they are much frequented by foreigners, but few of the natives either go abroad for learning or pursue it with much diligence at home. He, however, expressly excepts Alexandria from the latter part of this remark ; for, he observes, it not only receives many foreign students but sends out many of its natives, who settle as teachers elsewhere. Rome, he adds, is full of professors of literature from Tarsus and Alexandria.

In this passage Athens appears to be mentioned only by way of example, and to be placed on a level with many other cities, as to the number of strangers that resorted to its schools ; but, about a century later, the state of the case, though probably not altered, becomes clearer. We are informed by Philostratus, in his Lives of the Sophists (1. 21. 5), that a professor of rhetoric, who taught at Smyrna in the reign of Nerva, acquired such reputation, that scholars flocked to him from all the adjacent regions—Ionians, Lydians, Carians, Mœonians, Æolians, and the Greeks of Mysia and Phrygia. This, the biographer observes, was nothing extraordinary ; but his fame attracted also Cappadocians and Assyrians, Egyptians and Phœnicians, Achaians of the best families, and all the youth of Athens. By comparing what is here mentioned (no doubt with much exaggeration) as a singular occurrence, with what another passage in the same work represents as the ordinary state of things in the same period, we may collect that the natives of the eastern provinces here named, when they went abroad for instruction, commonly sought it at Athens. In the second passage (2. 1. 7), we find it incidentally observed, that the interior of Attica is the best school for one who desires to speak with propriety ; for the Athenians of the city, who receive as lodgers youths from Thrace and Pontus, and other barbarous nations in shoals, corrupt the purity of their own language more than they improve that of their guests.

Though we are here only concerned in ascertaining the fact, we will remark, that though the great name of Athens, and the celebrity of its professors, undoubtedly constituted the principal attraction that drew this concourse from distant lands, other accidental causes probably contributed very considerably to the same result. After the blow inflicted on it by Sylla, the city enjoyed a long interval of security, quiet, and prosperity, under the shelter of the Roman eagle, before its repose was disturbed by the presence of the Goths. During the early part of this period it was honoured and adorned with repeated marks of royal favour. Many of the emperors condescended to partake in the Eleusinian mys-

teries, which maintained their superior dignity against the rival superstitions of Phrygia, Persia, and Egypt. The best among the Cæsars loved to be called and known as friends of Athens : they embellished it with sumptuous buildings, in which, however, even their magnificence was eclipsed by the liberality or ostentation of Herodes Atticus ; and they exerted their power still more directly in favour of the school, by the rewards and privileges they conferred on its teachers.

This leads us to the consideration of a point more immediately connected with our present inquiry—the degree and manner in which the Roman government interposed its influence or authority in directing the education of its subjects. During the republic, all the measures that were taken with this view appear to have been entirely restrictive and prohibitory. In the year 592 of the city, an ordinance of the senate directed the prætor, M. Pomponius, who had consulted it on the philosophers and rhetoricians then settled at Rome, to take order that such people might be there no longer. Seventy years after (Gellius, xv. 11), the censors, one of whom was the celebrated orator Crassus, published an edict, in which, after premising that they had been informed there were persons who had set on foot a new kind of learning, and drew the youth to their schools, and took upon themselves the name of Latin rhetoricians, and caused young men to idle away the whole day, and that such practices were an innovation contrary to the usages and customs of their ancestors,—they declare it to be their pleasure that those who keep and those who frequent the afore-mentioned schools should understand that the censors disapproved of them—a pregnant intimation in the Roman style that they were to be immediately closed. The exact time at which measures of direct and public encouragement succeeded the connivance and toleration under which the prohibited studies soon regained admission is not so easy to determine, as it is to state the nature of the provisions themselves, though even as to this all is not perfectly clear. The Roman emperors had not the same motives of policy or vanity which induced one of the Ptolemies to found an Academy of Letters, to which he assigned a spacious building in his palace, together with grounds and walks, and which he endowed with lands for maintaining the common table of its members, who, for their learned wrangling and good living, were maliciously compared by a Greek satirist to birds fatted in a coop. The wretched tyrants who filled the throne of Rome during the greater part of the first century were occupied with other matters than the general interests of learning ; and the brutal

Domitian, who sank below the worst of his predecessors in his incapacity for intellectual enjoyment, and who hated philosophy as an ally of liberty, banished its professors from the capital, and even from Italy. Soon, however, after his death, if not before, the government began to foster certain branches of art and knowledge, by holding out privileges to those who practised and taught them.

The Pandects (L. xxvii., t. 1, c. 6) contain extracts from a rescript of Antoninus Pius, which was addressed to the cities of Asia, but was held to apply by construction to the whole empire. In one of these extracts, the emperor speaks of a constitution, by which his father (Adrian), at the beginning of his reign, had confirmed the honours and immunities then existing in favour of four classes of persons—philosophers, rhetoricians, grammarians, and physicians. He himself fixes the number of professors of each class who are to enjoy these privileges, (which consisted in exemption from certain troublesome and expensive municipal charges and duties, as well as from serving in the army, and from the obligation of guardianship,) according to the rank of the cities in which they practised. Those of the highest order, which were dignified by the title of metropolis, are allowed to have ten privileged physicians, five sophists or rhetoricians, and as many grammarians: the cities of the second order, including those in which courts of justice were held, may have seven physicians, and four of each of the other classes: the smaller towns, five physicians, and three of the two other classes. But of philosophers no number is determined, for which the emperor assigns a reason. '*Philosophers,' he says, 'are rare; but I am of opinion that those who abound in wealth will voluntarily contribute to the service of their country; and those who do not consider their substance as public property are clearly not philosophers.'*' It must be observed that the limit laid down in this law did not restrict the number of persons who were permitted to practise these professions, but only that of those who were to enjoy the immunity; and as to this, it was held, that although the number could not be exceeded, it might be diminished at the pleasure of the municipal corporations; nor did the immunity exempt any one from his share in the public burdens of his own town, unless he resided and practised there. As to the professions thus selected as objects of encouragement, we will observe, that the medical art shared the vicissitudes of philosophy and rhetoric at Rome. It was at first viewed with jealousy as a foreign and dangerous novelty by Cato the elder and the men of the old school: it was then barely tol-

rated,' and only began to be favoured and honoured under the emperors. The fortunes of jurisprudence were widely different. Confined originally to the highest order in the commonwealth, afterwards cultivated by men of the first rank, it was long regarded as a science too noble to be communicated by the ordinary modes of teaching. The studious youth acquired their knowledge, not by formal lessons of a salaried professor, but gratuitously and casually from the great man, who threw open his doors to them at the same time as to his clients. Under the emperors, the instruction in this branch of learning became venal and regular, and its professors were exempted from the burdens of guardianship, and perhaps placed on a level with the other privileged classes; but this immunity was expressly confined to those who taught at Rome, which remained to the last the only recognised law-school of the West, as Berytus and Constantinople became in the East. It is amusing to observe that the athletes, who had obtained three prizes in some of the sacred games, enjoyed the same distinction, while poets were expressly excluded from it.

The argument which Antoninus Pius drew from a philosophical topic to justify the withholding from philosophers the boon which he conferred on the masters of other sciences, seems not to have convinced his philosophical successor. Indeed, if we depended on the biographer of Pius in the Augustan History, we should be compelled to suppose that he himself had violated the principle of his own law; for we read there (p. 21, C.) that he assigned honours and salaries to rhetoricians and philosophers in all the provinces. But it seems probable that in this statement the author has confounded the enactments of Pius with a measure of Marcus Antoninus. What the former emperor did appears from his own words; and there is no ground for believing that he either endowed all the schools of rhetoric and philosophy in the empire from the treasury, or regulated the amount of the remuneration that each city was to bestow on its public professors. On the other hand, that Marcus established a foundation of this kind is well authenticated; but it was at Athens, and for the honour and advantage of that city alone. He appointed a yearly salary of about three hundred pounds for the heads of the four principal sects—the Platonics, the Stoicks, the Peripatetics, and the Epicureans, and for a professor of rhetoric. Philostratus (2. 20. 1) also mentions a chair of politics (*πολιτικὸς θρόνος*), with a lower salary; but this seems not to have belonged to the imperial foundation, and, perhaps, was not a permanent institution. In this en-

dowment, M. Aurelius followed the example of Vespasian, who, as Suetonius informs us, was the first that assigned annual stipends to Greek and Latin rhetoricians from the treasury, which, of course, refers only to Rome. He seems to have designed to give an impulse, which he may have perceived to be wanting, to the philosophical studies of Athens; and it is not incredible that the measure had some connexion with his hatred and jealousy of the Christians. He committed the choice of the four philosophers to his friend Herodes Atticus, but reserved to himself the appointment to the chair of rhetoric, in order to mark his sense of the eminent merit of Theodotus. This, however, was not intended to establish a precedent for subsequent nominations, which were left to the free suffrages of the most respectable citizens. We learn this from a dialogue of Lucian (*Eunuchus*), which, though it was meant merely to raise a laugh against the philosophers, deserves some notice, especially as it was written not very long after the endowment was made. It describes a contest that took place for one of the vacant chairs—that of the Peripatetic school. The Peripatetics, one of the interlocutors observes, do not hold outward goods to be absolutely worthless; and there was a very warm competition for the prize which was to be awarded by the votes of the most honourable citizens. There were many candidates; but two of them had clearly the advantage over the rest, and their merits seemed pretty evenly balanced. The trial began with a discourse from each of the rivals, in which he explained and defended the doctrines of Aristotle; and then they entered into a severe scrutiny of the life and character of one another. This altercation is the ludicrous part of the dialogue; but though both its matter and form are probably fictitious, we may safely infer from it that an inquiry into the morals of the candidates formed an indispensable ingredient in the examination on these occasions.

This, however, was a local and extraordinary regulation. In general, the income of a professor depended entirely on the numbers of the class he could draw to his lecture-room, though it may not have been unusual for a city to attract a man of high reputation, by adding a fixed salary to his ordinary emoluments. The oration of Libanius, entitled, *In behalf of the rhetoricians*, contains some particulars which will throw more light on this subject than any general remarks. The purpose of this composition is to prevail on the senate and people of Antioch to take some measures for the relief of four persons, who kept as many schools of rhetoric in that city: they are described as reduced to a state of

miserable and humiliating poverty. The author begs his hearers or readers not to suffer themselves to be deceived as to the condition of those for whom he pleads, by their title of professors or rhetoricians, or by their sitting upon thrones, or by any other circumstance in their outward appearance, but to listen to the truth from one who knows precisely the real state of the case. He assures them that some of these professors, notwithstanding the dignity with which they are invested, cannot afford the expense even of a small house, but are fain to live in hired lodgings. If one takes a house, he borrows money to purchase it, and is ever after loaded with debt ; some cannot even maintain a couple of slaves ; those who have committed the imprudence of marrying, and have become fathers, suffer, of course, aggravated distress, which sometimes compels them to pawn their wives' jewels for bread. It will be objected, the orator observes, that the stipends they receive from their scholars is sufficient for their maintenance. To this he replies, that these sums are pitifully small, and that the professors have great difficulty in collecting them from the parents of their pupils. Libanius attributes the evil partly to the misfortunes which had impoverished many families at Antioch, and partly to the system that had been adopted at court, which tended to check all liberal studies. The remedy he proposes is, that the senate should allot competent portions of the public lands for the subsistence of these unfortunate persons, and he alleges as a precedent the instance of a more successful rhetorician, who not long before had been rewarded for his services by the grant of a fruitful vineyard, in a beautiful situation, the property of the city. Libanius speaks elsewhere of the difficulty he himself experiences in obtaining his professional dues, though he frequently declares his own indifference to money ; yet, he observes, it is enough to provoke a man, and make him give up teaching, that a youth, when he has received from his father his master's stipend, instead of paying it to the sophist, should squander it away in dice or drinking, or things still worse, and should then have the impudence to show himself the forwardest in the school, as if he owed nothing, or had cleared all scores by merely presenting himself there. In his correspondence with St. Basil of Cæsarea, who, notwithstanding the difference of religion and station that divided him from Libanius, kept up a friendly intercourse with his old schoolfellow, and frequently sent him some of his own spiritual children as pupils,—the sophist professes himself ready to impart his instructions gratuitously to all who are capable of receiving them, though they

have nothing to give for them ; and perhaps we shall see grounds for believing that this kind of liberality, by which, in fact, more was gained than lost, was very generally practised by persons of his profession, though he mentions, at the same time, that he had not found in his own instructors the same indifference to outward advantages, and the same preference of ability and diligence in the poor scholar to dulness and indolence in the rich one, which he constantly shows toward those committed to his care.

Before we turn our attention to another side of our subject, it will not be irrelevant to our main purpose to consider a little more closely the nature of the school over which Libanius presided at Antioch, during a great part of his life, with signal success and brilliant reputation. We shall have occasion hereafter to notice some of the earlier occurrences of his life ; but we may here remark, that, on his final return to Antioch, his birth-place, he came with the expectation of succeeding immediately to the *throne* of a very eminent rhetorician, Zenobius, who had promised to abdicate in his favour. This friend, however, delayed to fulfil his engagement, and Libanius found himself forced to spend his eloquence on a class of fifteen youths, the greater part of whom he had brought with him to Antioch, and whom he taught in his own house. Here he languished, without the dignity of a public professor, and wasting his energies in irksome inaction, which he compares to that of Achilles at his ships, until a friend advised him, if he would increase the number of his pupils, to transfer his school to a more public situation, and urged him to take possession of one of the temples. It appears to have been not uncommon to apply these buildings to such uses. Libanius regrets, in one of his letters (lxxxvi.), that the temple of Fortune, which had once been thronged with students, was no longer so occupied : it had probably been converted into a Christian church ; and he ascribes great importance to the advantage which Zenobius possessed in holding his school in a temple of the Muses. (Another instance occurs in Philostratus, 2. 27. 5.) He, however, took a house close to the market-place, and soon experienced the benefit of the change, his audience being doubled. He next removed to the senate-house (probably a room under the same roof), where his *flock* became so numerous, as to give him employment till sunset ; whereas, according to the general custom, the sophists ended their daily work of instruction at noon. The death of Zenobius left him, though not without competitors, yet confessedly the first rhetorician at Antioch.

In one of his orations, (the 65th in Reiske's edition,) in which he vindicates the merit and success of his scholastic labours against his detractors, he boasts of several distinguished men whom his school had sent out to discharge important offices in the state, and of the great variety of countries that had entrusted a part of their youth to his care. It is remarkable, that in a long list of provinces, including (together with Thrace and Constantinople) almost the whole of Asia then subject to the Romans, he notices Cappadocia as having contributed least to the number of his pupils; yet, as we have already mentioned, his correspondence with Basil speaks of many whom the saint had recommended to him from his Cappadocian see, and one letter (1595. Wolf.) begins with the words—*'Will you never have done, Basil, filling this sanctuary of the muses with Cappadocians?'* These youths undoubtedly came to finish, with the assistance of Libanius, the education that was to prepare them for the various pursuits to which they were destined, and their average age was probably the same at which it is usual to enter a modern university; yet Libanius appears in a character to which we should more readily apply the name of schoolmaster than of professor. Thus, in one of his letters, (891,) he describes himself as seated in the midst of youths, who are receiving his lessons partly by persuasion and partly by constraint. What the engine of this constraint was, he informs us very distinctly in a great number of passages. In one, (Or. 2,) where he is defending his character from a charge of moroseness, he alleges, as a proof of his good nature, that he is not austere or stern even toward his scholars, but renders their tasks agreeable to them by the gentleness of his deportment. And hence, he says, I have no need of blows, for they do everything willingly, which must be considered as a rhetorical colouring; for elsewhere, when it suits his purpose, he protests that he has not spared blows, or words more galling than the lash, to rouse indolent tempers. (Or. 65.)

Quinctilian (II. 2.) notices and condemns the practice, according to which boys and youths bordering upon manhood were brought together indiscriminately in the schools of the rhetoricians. He remarks, that a boy usually continued to attend those schools for some time after he had grown a young man; and that among the Greeks the student entered them at an earlier age, because in so doing he did not forthwith cease to frequent the grammar school where he had imbibed the rudiments of literature. The oration of Libanius, *On the carpet*, (59,) affords a proof that the influ-

ence of his authority did not extend far beyond the walls of his *sanctuary*; and that he had not succeeded in inspiring his pupils either with fear or self-respect, sufficient to restrain them, when out of his sight, from indulging in the excesses of school-boys broke loose, with the boldness and strength of a riper age. The occasion of this discourse was an incident that had just occurred, and had made a great deal of noise in Antioch. Youths of good condition, while they were pursuing their literary studies, were usually attended by a domestic called a pedagogue, who, if a slave, which he seems not always to have been, belonged to a class esteemed very superior to that of common menials. His functions resembled very closely those of a private tutor at a public school in England, whose business is not so much to communicate any particular kind of instruction to his pupil, as generally to watch over his conduct, and to enforce industry and good behaviour. For this purpose, the pedagogue was entrusted with a large share of parental authority, and was even permitted to use corporal chastisement. It appears that one of the persons who attended the scholars of Libanius in this capacity, had made himself obnoxious to a part of them. Libanius insinuates that they had been instigated against him by one of his own rivals, a professor of Latin rhetoric, who had taken offence at the pedagogue for decrying the studies of his school. The consequence, however, was, that some of the more robust wreaked their vengeance on the unfortunate man by tossing him in a carpet. The outrage was committed publicly, and caused great scandal, both in the class to which the sufferer belonged, and among the public at large. Libanius himself did not escape censure, as if his excessive lenity had encouraged the youths to this breach of discipline. He therefore addressed a formal oration to the perpetrators and their comrades, in which he endeavours to impress them with the enormity of their offence. What is chiefly remarkable in this piece, beside the fact to which it immediately refers, is, first, the opening, which alludes to some disorders that had broken out on a prior occasion among the students, and had been repressed by the orator's remonstrances; but still more one of the topics employed to aggravate the heinousness of the act. 'It would have been less atrocious,' the writer observes, 'if the victim had been one of the profane persons not protected by the sacred ground of the muses. An insult, indeed, offered even to an artisan, is unbecoming in one who is reared within these hallowed precincts, because it tends to bring learning itself into disrepute among the vulgar. Still a sally of youth-

ful petulance directed against people of this condition would have been comparatively a venial fault. But at least let the nursling of the muses confine his mischievous propensities, if he cannot completely suppress them, to persons whose station keeps them without the pale of liberal education: let him go no further (we here translate literally) than giving foul words to a goldsmith, insulting a shoemaker, striking a carpenter, kicking a weaver, &c. Even this is indecent, but yet not so bad as the quarrels that sometimes take place among fellow-students, and end in blows; and it is an incomparably slighter transgression than an assault upon a person who partakes in some measure of the sanctity of a preceptor.'

We do not find, at least we are not aware of, any hint in Libanius of his having made any classification of his pupils according to their various ages, or degrees of proficiency. Philostratus (*De V. S. II. xxi. 3.*) mentions, as a peculiarity in the plan of his master, Proclus, that he assigned separate places in his school to the boys and the young men, from which we may infer that the contrary practice prevailed at Athens, as it did at Rome in the days of Quintilian. But even this arrangement would not have remedied the many inconveniences and mischiefs that must have arisen from collecting the two classes in the same room. The cause which prevented them from being kept apart was one that produced many other still more pernicious effects, and belonged to the essence of the system. The chief business of a school of rhetoric consisted in the delivery of declamations, sometimes by the master as models, sometimes by the scholars as exercises. In either case the speaker desired a large audience, whose approbation was the test and the reward of his success.

We have spoken of the encouragement held out by the Roman government to the cultivation of certain branches of knowledge, but we have still to consider a much more important part of the subject, namely, the natural operation of the state of society, of manners, and opinions, in promoting particular studies. The ordinary course of a liberal education throughout the Roman empire consisted of two stages. The first was the school of the grammarian, whose province it was to interpret or illustrate the best authors, and to form the pronunciation and the language of his scholars; the second was the school of the sophist or rhetorician, who taught, principally in the way already described, the art of speaking; and in this latter school the students appear usually to have spent the whole interval between boyhood

and manhood—the time that with us is occupied in the higher forms of a school and in a university. To understand how so considerable a portion of human life should have been commonly devoted to a pursuit which is almost entirely excluded from modern education, it is necessary to form some conception of the various ways in which the art of speaking might become useful to the possessor, and of the force of the motives that rendered the acquisition of it desirable. Some of these were such as are common to the ancient and the modern world; but others arose out of the peculiar taste and manners of the former. That branch of the legal profession which is exercised in courts of justice, and generally with success proportionate to the power of speaking displayed in it, was not more lucrative, and offered no higher prizes to ambition than it does now. But it was not less productive of honours and emoluments; and analogy inclines us to believe that eloquence, or at least rhetoric, which is the thing we are here considering, formed a more essential ingredient in the qualifications of a successful pleader, during the decline of the Roman empire, than it does anywhere at the present day. A still more superficial acquaintance with law than now suffices for a flourishing advocate, appears to have contented those of antiquity. The toil of raking up precedents out of musty volumes was abandoned even oftener than it is now to some plodding subaltern, and the orator confined himself to the nobler employment of informing and animating the dry and shapeless mass with the breath of his genius. Quintilian, indeed, (xii. 3.) remonstrates against this practice. He admits that it may sometimes be sufficient to get up the law of a case for the occasion; but he represents the risk which a pleader runs who, having laid up no stock of legal learning, trusts entirely to the temporary supplies he can draw from a prompter, on whose judgment and good faith he is compelled to rely. We know, however, that this risk continued to be run; and the state of the Roman laws for a long time afforded even a better excuse for such rashness than our own. Libanius boasts of having sent out of his school pleaders who, if merit had received due encouragement, would have risen to the top of their profession. He complains of the corruption of the times, which had deprived eloquence of its just weight in the tribunals; and he mentions with indignation the recent good fortune of an illiterate pickle-dealer, (Orat. 65,) who, happening to stray into a court of justice, was seized with the ambition of becoming an advocate himself, and by dint of noise and impudence, had not only gained an immense practice, and amassed

vast riches, but had risen to the honour of pleading in the imperial presence. But the sophist, while he deplores the success of this vulgar fellow, expresses an equal contempt for those who study the laws, and does not scruple to say that this is a pursuit appropriated to dull intellects. (Orat. 4.)

But in other walks of life, opportunities occurred more frequently for the display of rhetorical talents, and they were more generally expected and required than in modern times. No man in a high station could acquit himself decently of his functions without some degree of familiarity with the art of speaking. It was usual for magistrates on entering into office, as well as on other public occasions, to address large assemblies, composed chiefly of intelligent and fastidious hearers. Libanius mentions with pride that one of his scholars, who had been promoted to the government of Lycia, had not only relieved the distress of the province by his wise and upright administration, but had adorned the festivals of all its cities by his eloquence, so that the Lycian sophists improved themselves in their art by his example. (Orat. 65.) Nor ought it to be overlooked, when we are considering a period in which Christianity was basking in the sunshine of worldly prosperity, and was continually increasing its means of holding out the most powerful attractions to selfish ambition, that the high offices of the church called for the exercise of the rhetorical faculty still more frequently, and more imperatively, than those of the state. It was possible, indeed, at this time to acquire perhaps a wider renown, certainly a greater share of the deepest veneration, by a very different process—by renouncing, in an extraordinary degree, the gift of speech, and burying language and thought in the silence of a desert. But the more lucrative and brilliant stations, those which conferred immediately wealth and dignity and power, could scarcely be attained or becomingly filled without some command of elocution. This was more especially indispensable in the great cities, the posts most coveted, where the audiences were most refined, and were too prone to pay an improper degree of attention to the style and delivery of discourses designed for their spiritual edification, though embellished, in compliance with their weakness, with the graces of profane rhetoric; for these graces were borrowed from the Pagan schools. The most eloquent of the Greek fathers learnt either with or from Libanius, and formed their sacred compositions on the same fashionable model. St. Basil, indeed, after his elevation to the archiepiscopal throne of Cœsarea, professes to have dropped those literary accomplishments which he had acquired at Athens, and which his

friend Libanius was assiduously cultivating on *his* throne at Antioch. ‘Our converse,’ he piously observes, (Epis. 1584,) ‘is with Moses and Elias, and other holy men, who speak to us in a barbarous language, and we repeat the lessons we derive from them, which are true in their matter, though rude in their expression.’ But the sophist replies, not with more politeness than justice,—‘Hold fast to the books which you praise, as excellent in their sense though falling short in their style; but the studies which are still mine and were once yours, have struck roots in you that will abide by you as long as you live, even though you should neglect to water them.’

We will remark, by the way, a feature of the times not without importance, as a symptom and as a cause of the attention paid to rhetoric,—the custom that prevailed universally among hearers of every class, of expressing their approbation of a public performance by vociferous applause. The boy who recited an ingenious exercise among his school-fellows was cheered with their shouts and plaudits, as an unsuccessful attempt was sometimes received with hisses: the master himself, who declaimed for the instruction of his scholars, measured the depth of the impression he had made on them by the energy of their acclamations. The magistrate who addressed the people in public was disappointed if he did not earn a similar testimony of their favourable judgment. The oration of Libanius to *Timocrates* (41) unfolds some curious particulars connected with this practice. We learn from it that there was at Antioch, in the time of Libanius, a band of men consisting, it is said, of about four hundred of the vilest of the populace, who exerted an absolute control over the public voice in the theatres. They were in the pay of some of the actors, whom they served by hailing their performances with clamorous applause, to the great annoyance of the disinterested spectators. So far we seem to be reading a description of what is constantly taking place, only not on quite so large a scale, in our own day: but it appears that these mercenaries were not content with this market for their hands and lungs, and that they found customers of a different class;—the magistrates themselves were reduced to depend upon them, and to bargain with them for their support. Libanius addresses himself to a magistrate who had returned from the theatre, disappointed by the cold and silent reception he had met with on his first appearing there in his new office, and consoles him by exposing the manoeuvres of the hirelings. ‘When the new magistrate is expected at the theatre, they concert their mea-

sures together ; and, while he is present, keep a dead silence themselves and force the rest of the audience to maintain it also. The magistrate is surprised and confused : he reddens, turns pale again, affects to converse with his friends, attempts to rouse the feelings of the public by addressing them through the herald. Their silence is unrelenting, and he finally resorts to the expedient of sending privately for the leaders of the band, and coming into their terms.' From the lecture-room and the theatre the habit of indulging in boisterous demonstrations of delight was carried even into the churches. The custom of applauding sermons in the same manner as theatrical exhibitions, which at present, so far as we know, exists in no other country of Europe but Portugal, (where it might be witnessed, at least, a few years ago,) crept very early into the religious assemblies of the Christians. One of two remarkable instances afforded by ecclesiastical history is the better suited to our present purpose, as it occurred at Antioch : it was one of the charges made against Paul of Samosata, when bishop of that city, that he used the gesticulations of a sophist in the pulpit, striking his thigh and stamping the floor ; and that he reviled and insulted that part of his congregation which would not join the men and women of his faction, who applauded his discourses as in the theatres, by waving of handkerchiefs—by shouts and gestures (Euseb. vii. 30). This was in the third century : the other instance belongs to the fifth, and is accidentally mentioned by the ecclesiastical historian (Socrates, vii. 13) in describing the tumult at Alexandria, which ended with the tragedy of Hypatia (See Gibbon, Chap. xlvii.). The schoolmaster, Hierax (See Milman's History of the Jews, vol. iii. p. 197), who was the immediate occasion of the rupture between the prefect Orestes and the archbishop St. Cyril, had before made himself conspicuous by his activity in exciting plaudits at the archbishop's sermons.

Finally the profession of a sophist itself opened very inviting prospects to ambition ; it rewarded the successful artist with a very ample measure of wealth, honours, and reputation. Its resources were not confined to the emoluments of a flourishing school, nor even to the extraordinary donations that a distinguished professor might receive from the city in which he resided. The amount of these indeed was often very considerable. The rhetorician who filled the throne at Athens might, if he was so inclined, keep up high state, which was thought to accord well with his dignity. Thus we read of one (Philostratus 2. 10. 2), that his dress was costly, that he wore precious stones, and came down to

his lectures in a chariot, of which the reins were studded with silver: of another, at Smyrna, that he was in the habit of travelling with a great train of baggage servants, dogs, and horses. The sophists, indeed, were sometimes men of noble family, and of good private fortunes, who did honour to the profession by exercising it freely. But besides these ordinary sources of wealth there were others arising from the passionate fondness for rhetoric, which survived all other literary tastes among the Greeks, and was shared by the Romans. An itinerant sophist, who possessed the talent of extemporaneous speaking, was always sure of drawing an audience, who attended his performance with feelings of interest not less intense than those that are excited in a polished capital of modern Europe by the announcement of a new ballet-dancer. Curiosity was of course heightened when, as often happened, the stranger sent a challenge to the sophist of the place, to declaim upon any subject that might be proposed on the spot. Such a trial of strength was an entertainment which attracted the greatest personages in the state, and even the parallel just suggested will scarcely enable our readers to conceive the transports which exhibitions of this kind are said to have produced; and probably nothing but the performance of an able *improvvisor* can afford an adequate idea of the powers that were frequently displayed in them. A very lively description of such a contest may be found in Philostratus (2. 5. 3). The sophists, however, were not unfrequently called to more important and dignified occupations: they were often chosen by a city or a province as its organs, to represent its grievances or its wants to a magistrate, or to the emperor himself. Several of the most interesting orations of Libanius relate to local abuses and vexations, for which they seek redress. And there were more ways than one in which a rhetorician might obtain entrance at court, and rise to a high place in the emperor's favour: the office of his private secretary was commonly bestowed on a person of this class. Sometimes the emperor himself found occasion to employ the talents of a celebrated sophist in distant missions. Thus the fame of Eustathius induced Constantius to send for him to court, in spite of his adherence to Paganism, and to appoint him one of his ambassadors to Sapor, in the hope that the address and eloquence of the sophist might win from the Persian king some relaxation of the terms on which he had offered peace to the Romans. If we were to believe Eunapius (Vit. Soph. p. 30, Boissonade), Eustathius charmed the barbarian so, that he was on the point of laying aside his tiara, his purple, and his gems, and assuming the cloak of a philo-

sopher. The biographer adds, that the success of the embassy was beyond hope ; it was, however, in fact, just what might have been expected from the nature of the means employed, that is, a complete failure.

We have been drawn certainly farther than we intended at first—chiefly by the wish to lay before our readers materials for their judgment rather than opinions of our own—into what may appear a series of digressions from our original subject. The length to which these introductory remarks have insensibly expanded will compel us to compress the remainder into a compass narrower than we meant to have allotted to it, and seemingly, perhaps, out of all proportion to that which has been occupied by the former. We trust, however, that what has been said will serve to prevent the brevity to which we must now confine ourselves from being obscure. We return to the view we have already taken of Athens, as rising, under imperial patronage and the co-operation of favourable circumstances, to a pre-eminence over the other cities of the empire as a seat of education in philosophy and eloquence ; and we proceed to consider how far this state of things continued, or had undergone a change, in the fourth century.

The endowment by which M. Aurelius had cherished the four principal Schools of Philosophy did not protect them from the revolutions to which public opinion is always liable, and which are continually shifting the current of human thought to fertilize new tracts, while it leaves systems reared by mighty intellects, and designed by them to be imperishable monuments of their power, and the pride and joy of posterity, solitary and neglected, to moulder away into ruin. In the ensuing centuries the doctrines of the rival sects excited less and less interest, and instead of being cultivated, maintained, and developed, were studied by the few who paid any attention to them, under the feeble impulse of literary curiosity. If any exception is to be made from this remark, it must be in favour of the Platonic Philosophy, one side of which, the poetical, mythical, and mystical, being intimately connected with the prevailing systems of the three first centuries, found many passionate admirers : but this was only the vestibule of the sanctuary into which the votaries of the new theosophy were admitted. The most active and generous spirits of the age, formed by nature to enlighten and adorn mankind, delighted in the boldest flights of speculation, which carried them far beyond space and time and sense, into regions where they could hold uninterrupted converse with the abstractions they had formed for themselves,—could freely indulge in wandering up and down scales of æons, or could vault at once into

the infinite abyss, where primeval mind dwells with eternal silence. The practical wisdom which was brought back into the sublunary sphere from such excursions, corresponded to their lofty range by its exquisite unfitness for the purposes of human life, and its direct tendency to invert the natural and healthy order of society. The passions and appetites were to be subdued, not to the end that the intellect might be rendered a clear and faithful mirror of nature, history, and art, and the body the pliant organ of pure and rational affections, but for the sake of an imaginary communion with an ideal world, in which the objects and relations of the one actually existing were to be completely forgotten ; or a triumph was to be obtained over time and space, by removing the obstacles that intercept our view of the distant and the future. It may be easily conceived that men who were accustomed to such trains of thought and fancy, found the speculations of the elder sects tame and dull, and felt little interest in the study of their doctrines. We are unable to say whether the chairs of philosophy founded by M. Aurelius continued to be filled in the fourth century ; or whether those who occupied them combined the practice of rhetoric with their nominal and almost obsolete profession ; but it is certain that all the celebrated men who are recorded by Eunapius to have cultivated both divine and human learning, that is, both philosophy and rhetoric, at this period, were persons of very different pursuits from those of Plato or Aristotle, Zeno or Epicurus ;—they were sages who floated in the air, who were often seen encircled with a glory, who infused life into brute matter, and saw the secrets of the past and the future no less clearly than the objects present to their bodily eyes. The prevailing theosophy and theurgy, which had replaced the metaphysics and ethics of antiquity, were no doubt taught at Athens, but chiefly, perhaps, in connexion with the Eleusinian mysteries, which now attracted all those who still clung to the old faith, by the double charm of secret and proscribed rites. Thus we find that the emperor Julian, after he had made considerable progress in theurgic lore, under the guidance of Maximus at Ephesus, was drawn to Athens by the fame of the Hierophant, from whose instructions he was led to expect some additional knowledge (Eunapius, p. 52).

On the other hand, the Athenian school of rhetoric continued to flourish with unabated or increased reputation. If its rivals in Asia Minor still cultivated in the fourth century the Asiatic or Ionian character on which they had anciently prided themselves, at least they could not vie with Athens in the number of strangers that flocked to it from all parts of the

East. Other schools of considerable note were looked upon as secondary or preparatory, and the students left them, sometimes at an advanced age, to finish their education at Athens. In this respect, and in the great preponderance of the foreign over the native youth, which rendered the former a very distinct though not a legally recognized body, the Athenian school made a near approach to the essential character of a university. Its members were fully conscious of belonging to a separate and an important class, but they wanted a formal bond of union, which might at the same time have served to secure order and discipline among them. The consequence was a state of things which, though certain modern universities may present many points of resemblance, has probably never been exactly paralleled. The seat of the provincial government was Corinth: the inhabitants of Athens and the local magistrates felt too strongly the obvious interest which the city had in the residence of so many strangers, many of whom were of noble and affluent families, to interfere very actively for the purpose of thwarting or controlling them; and the professors themselves had motives by which they were too often swayed, for not only conniving at sallies of youthful impetuosity, but prompting, directly or indirectly, acts of tumultuous violence. Their credit and emoluments depended on the number of their pupils, and the latter conceived their own honour to be concerned in the success and reputation of their respective professors. This led them to form clubs or associations for enlarging, by all the means in their power, the several classes to which they belonged. It appears that, as in the Law School of Bologna, there was an ultramontane and a citramontane university, so at Athens there was an ultramarine and a citramarne party, whose emulation was provoked and urged by national antipathy; and was of course raised to its highest pitch when the professors, whose interests they espoused, were their countrymen.

We shall use the testimony of eye-witnesses to bring the state of the case as clearly as possible before the view of our readers. We will begin with St. Gregory of Nazianzum, who studied at Athens with St. Basil, and, in his funeral panegyric of his friend, introduces a description of the practices that prevailed there, which is the better suited to our purpose, because it was designed for the information of hearers who were not acquainted with the scenes he describes. The history of St. Basil exemplifies one of our preceding remarks. He had first studied at Cæsarea (the Cappadocian), which Gregory extols, in terms that seem to be greatly ex-

aggerated, as a most flourishing and celebrated school. From hence he proceeded to Constantinople, of which the orator speaks no less favourably, as supplying the most consummate sophists and philosophers. But here again we cannot help suspecting him of a partiality that has considerably over-coloured the truth : for he is at direct issue with Libanius, who was, for some time, professor there, and who represents Constantinople as very inferior in this respect even to Nicomedia ; and though he was certainly no less prejudiced against the new capital than Gregory was in its favour, he mentions facts and details which entitle him to credit. From Constantinople, however, Basil's insatiable thirst of knowledge is said to have led him to Athens—*the seat of literature*, though, as Gregory observes, it was, in other respects, a residence detrimental to piety ; for it is richer, he says, than all the rest of Greece in idols, and it is difficult not to be carried away by the warmth of their advocates. That, in spite of this danger, the Christian youth resorted from remote countries to Athens, must be considered as a decisive proof of its literary pre-eminence. Gregory wishes to show that his friend had attained an extraordinary reputation even as a young student, and thus is led to relate how he had escaped the annoyance to which all who go to study at Athens are subjected on their first arrival. The young men, he says, are almost all mad for their sophists. He illustrates this madness by the passionate transports of the factions in the circus on behalf of their favourites. Their ambition, he proceeds, is to swell their own numbers, and thus to enrich the sophist, to whom they are devoted ; and this rage is carried to such a length, that towns, roads, harbours, passes, plains, promontories, every part of Attica and of Greece, are beset by them, and the inhabitants themselves are engaged in the interest of some or other of the parties. A young man has no sooner arrived than he is made prisoner, half in jest, half in earnest, by the faction into whose hands he may chance to fall. They carry him to the house of one of their friends ; try his temper and his wit by some half serious, half jocular threats ; and finally lead him in solemn procession to the bath, where, after a sham struggle, he is admitted, and is then pronounced free of their order.

Libanius, in the autobiography which he has given, in the shape of a discourse on his fortune, discloses some further particulars relating to this custom. He had prosecuted his rhetorical studies at Antioch with great ardour to the age of twenty. He was then inflamed, by the accounts he heard of Athens and its school, with the desire of visiting it. He

accordingly travelled by land to Constantinople, where he expected, through the interest of a friend, to obtain the use of the imperial post for the remainder of his journey. Being disappointed in this hope, he embarked in a vessel bound for Attica. On his arrival at Athens he was not so fortunate as Basil; for though he had previously fixed on the sophist whom he meant to attend, he was seized on entering the city by a pressgang in the service of another: from this he was rescued by one in a different interest, though still not that of the man he had chosen. These kept him in close custody till they had extorted from him an oath that he would enter their school. He conceived a very low opinion of the sophist whom he was thus compelled to hear; and pleaded ill health as an excuse for not taking his part in the noisy plaudits with which his comrades were wont to greet their master's performances. This constraint, he observes, might appear, at first sight, a mark of the malignity of his fortune; but it was really a boon which she had vouchsafed to him in her kindness. He solves the enigma by pointing out the happy consequences of this seemingly untoward accident. 'From a boy,' he says, 'I had heard of the wars that were waged by the bands ( $\chiορόι$ ) in the midst of Athens, with stones and clubs, and still more dangerous weapons; of the wounds that were exchanged; and of the law proceedings that ensued. I admired the pious courage of the youths who thus devoted themselves in the cause of their teachers, and I hoped that I might one day myself reap similar laurels. I saw nothing but what was enviable in the life of a captain of a band; in running to Piræus and Sunium, and other ports, to press novices on their landing; in journeys to the tribunal at Corinth, to answer for such piracies; in keeping up the spirits of my party by a series of entertainments, which would have involved me in debt. But Fortune saved me from this splendid ruin, by chaining me to the throne of a master for whom I felt no respect or concern, and still less any inclination to run risks in his cause; while my comrades did not venture to force me to join them in their expeditions and conflicts, lest I should make their violence a pretext for breaking my oath and renouncing the school.'

He remained five years in this captivity, when an accident happened which procured for him what he everywhere speaks of as the highest honour a rhetorician could attain to—that of being nominated to fill one of the chairs at Athens. A new governor had come into office, who thought it his duty to repress the disorders which agitated that city. He determined to dismiss the sophists who, he conceived, had encou-

raged the youths in their excesses, and to fill their places with others. Libanius was one among the objects of his choice, and experienced all the envy and ill will which this distinction drew with it, though without any immediate advantage, as the proconsul afterwards relaxed his severity, and restored the disgraced professors to their chairs.

It is clear that the transaction here alluded to in a cursory manner by Libanius, is the same as one which is more minutely described by Eunapius in his Life of Julian. It must be observed that Eunapius himself was familiar with these scenes. He had come to Athens at the age of sixteen, and he relates that a great company of students were passengers in the same vessel. When it came to anchor in Piræus, Eunapius was suffering under a violent fever caught during the voyage. It was night time, and the master of the ship, who was an old friend of the sophist Proæresius, and who knew that if he staid till morning, his passengers would be intercepted by some of the parties who were constantly on the look-out for arrivals, instantly marched them up to the city, though Eunapius was unable to walk, and they were obliged to carry him on their shoulders. They, however, reached the house of the sophist in safety, and were welcomed with the delight that was naturally caused by so important an accession, at a time when, as the writer observes, wars were waged about one or two youths. Proæresius immediately sent for some of his relatives, who undertook to receive the new comers in their houses, and to initiate them by the ceremony of the bath.

In his Life of Julian, the master of Proæresius, and the most celebrated sophist of his day, Eunapius records the occasion of the incident mentioned by Libanius. Julian was a native of Cappadocia, and had the strength of the ultramarine party on his side. His chief rival, Apsines, was a Lacedæmonian, who was supported by a band of his robust countrymen. Julian had a theatre of polished marble in his house; and the biographer remarks, that Athens was at this period in such a state of ferment, that none of the sophists ventured to exhibit in any public place, but received their pupils in private theatres. It fell out, that during these civil broils, the followers of the two rivals came to blows in the streets, and the Cappadocians were roughly handled by the Lacedæmonians. But the latter, fearing that their antagonists might call in the arm of the law to avenge their defeat, cunningly anticipated them, and charged them with the riot. The Roman governor, a stern man, ordered Julian himself, as well as his scholars, to be apprehended, and brought in

chains to Corinth. But at the trial, if we might believe the report which Eunapius gives on the authority of an eye witness, Proserpinius, who was one of the accused, having obtained leave to defend his master and comrades, so worked on the proconsul by his eloquence, that he started from his seat, and applauded like a schoolboy. The charge was dismissed, the prisoners released, and the complainants were threatened, or (as the words may intimate) actually chastised with Spartan discipline.

We must here break off, and conclude by requesting those of our readers who have the means, to look into Schlosser's *Archiv für Geschichte und Literatur*, (Erster Band, s. 217,) where they will find this subject treated, though, from a somewhat different point of view, with that agreeable and judicious writer's usual easy flow of style, and well-digested learning.

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#### ON MATHEMATICAL INSTRUCTION.

IT is matter of general remark that mathematical studies do not yield that pleasure to the young, which the more intelligent and well inclined among them, derive from every other part of their education. If the opinions of a number of youths could be collected, at the period when their education is just completed, it would be found that, while nearly all profess to have derived pleasure from their classical pursuits, the very name of mathematics is an emblem of drudgery and annoyance. In saying this we are not speaking of the Universities, in which the choice of studies is so far left to the taste of each individual, that no one can have those feelings against any particular study, which arise from the remembrance of its having been forced upon them. Our remarks apply to the hundreds of schools with which the country is studded, where, in fact, the great majority of the educated portion of the community receive the knowledge which entitles them to take that title, in most of which something is taught under the name of mathematics, bearing much the same likeness to an exercise of reason that a table of logarithms does to Locke on the Understanding. Honourable exceptions are arising from day to day; and those who guide the remainder will, if they are wise, look out in time, and see with what favourable eyes the world regards any well-regulated attempt to improve the system. Why are so many proprietary schools erected? The reason is, that parents, who have neither time to choose, nor knowledge to guide them in the

choice, of a place of instruction for their children, find it easier to found a school, and make it good, than run the doubtful chance of placing their sons where they may learn nothing to any purpose. We propose in this article to make some remarks on the manner of teaching mathematics as it is, and as it ought to be.

A very erroneous idea prevails with regard to the object in view, in making mathematical studies a part of education. There are places in abundance where book-keeping is the great end of arithmetic, land-surveying and navigation of geometry and trigonometry. In some, a higher notion is cultivated; and in mechanics, astronomy, &c., is placed the ultimate use of such studies. These are all of the highest utility; and were they the sole end of mathematical learning, this last would well deserve to stand high among the branches of knowledge which have advanced civilization; but were this all, it must descend from the rank it holds in education. It is no sufficient argument for the introduction of such pursuits that their practical applications are of the highest utility to the public, and profitable to those who adopt them as a profession. The same holds of law, physic, or architecture, which, nevertheless, find no place among the studies of the young. It is considered enough, that the lawyer should commence his legal pursuits when his education in other respects is completed; and so would it be with him whose calling requires a knowledge of mathematics, were it not that an important end is gained by their cultivation, which is quite independent of their practical utility,—viz. the exercise of the reasoning powers. It is well known, that mathematical demonstration has acquired the name of certain, on account of the simplicity and perfect admissibility of the principles assumed, and the strictly logical nature of the steps by which conclusions are deduced from these principles. The results are also, in many cases, matters of common experience, by the application of which the reasoning may be confirmed. The same species of logic is used in all inquiries after truth; but the broad distinction between mathematics and the rest is, that the data or assumptions of the first are few, undeniable and known to the student from the beginning; no question can be raised upon them which in any way affects the disposition to admit them, and they require no induction from facts which can be disputed. The student can then perceive more clearly in these studies, than in any others, what is reasoning, and what is hypothesis; he sails along a coast, of which all the points are well laid down, that he may be able

to use the experience there gained, in future voyages of discovery.

The actual quantity of mathematics acquired by the generality of individuals is therefore of little importance, when compared with the manner in which it has been studied, at least as far as the great end, the improvement of the reasoning powers, is concerned. On looking at the question in all its lights, we might be tempted to say, let every one learn much and well; well, in order that the habits of mind acquired may be such as to act beneficially on other pursuits; much, in order to apply the results to mechanics, astronomy, optics, and many other ennobling sciences which can never be completely understood without them. But considering that the great majority of youths have not time to devote both to the subject and its applications, and cannot therefore hope to be able to attend scientifically to the different branches of natural philosophy, the next point is to secure a habit of reasoning in preference to the knowledge of a host of results. The latter is preferred in most of our schools, and for this reason, that ninety-nine parents out of a hundred are more likely to ask their sons, How many books of Euclid have you read? How far have you got on in algebra? than, In what manner have you studied? Do you understand what you have read? It is common enough for a boy to have acquired arithmetic by rule, six books of Euclid by rote, the greater part of Bonnycastle's Algebra by rule, and plane trigonometry in the same way, with just enough of the use of a table of logarithms to secure him against working any question with correctness. All this, if well learnt, would constitute a respectable portion of mathematical knowledge, and would enable an intelligent pupil, when the day arrives in which he begins to see the value of knowledge, to proceed in his studies without the aid of a teacher. But if we proceed to examine the manner in which this is gained, we shall in far too many cases establish the truth of the following sketch, which we believe to be a fair representation of the manner in which mathematical science was taught in our time, and it is to be feared is still taught to a great majority of those who commence this study.

The child learns from his nurse or his mother our method of representing numbers, by a plan of teaching which makes two symbols such as 16 and 25 nearly as independent of one other in his head as the ideas attached to the words 'book' and 'steam-engine.' When he arrives at school he is taught to say the table of numeration, and then proceeds

through a number of rules, that is, directions to put figures together written in a book, with names at the head of them such as multiplication, division, &c., which if he understand, it is well, but if not, nobody cares. Some of these rules are so unintelligible, that were it not for an example at length which usually accompanies them, they would be equivalent to as much Hebrew. It is a fact that in some treatises not yet out of date, the inverse rule of three is defined as the rule where 'less requires more, and more requires less.' As to the reasons for the rules, the pupil cannot trouble his head (to use a common term for that much avoided operation, thinking) about them, not knowing whether there are any at all, or whether the rules themselves came from the moon, or are a constituent part of that wisdom of our ancestors about which he sometimes hears. Should there be any natural defect in his mind, owing to which he finds it difficult to produce a correct result, knowing neither what he is to do, nor how to do it, there are several approved methods of proceeding. The best of these, unfortunately now somewhat exploded, is a flogging; which works on a principle recommended by physicians, of curing a disorder in a part which cannot be got at, by producing the same in another which can. Next to this comes the method of keeping the patient from all recreation, until he has done what is required of him, it being considered the same thing in the end, whether he cannot work for want of means, or will not from want of application. It has been suggested to teach the principles involved in the rules, and thus to render the pupil their master instead of their slave, but to this plan, independently of its being an innovation, there are grave objections. Many instructors, if placed in the temple of truth, would be obliged to ask, 'How shall I teach what I do not know?' Others would say, 'All I have to do at present is to look at the pupil's work, and compare it with the key which I have, locked up in my desk—should I begin teaching principles and all that, there would be no end of troublesome questions.' In this last idea is much of the secret of the system. It works well, whatever the pupils may do, because, like the grammar and dictionary instruction in Latin and Greek, it saves the teacher a world of trouble. We remember to have seen a rule-book of algebra which recommended itself to the masters, on the ground of saving them from being 'pestered with questions.' But to return—the *sums* as they are called, when, after many a correction, they coincide with the masters' key, are carefully copied into a book, each with Qu. at the beginning and Ans. at the end, with red ink lines in the places which taste points

out, and this goes home at the vacation with the young gentleman, a triumphant proof of his progress, shewing the delighted parent that his hope is in ‘compound multiplication,’ or if he be a genius in ‘discount’ or ‘barter.’ This has been done in three years (we speak from knowledge), which, considering that the last rules consist in dividing a sum of money into parts, and taking some of those parts, is not such bad progress. In this way is the pupil driven through some dozens of commercial rules, reducible on principle to three at most, and these unconnected, ill arranged, and in nine cases out of ten utterly useless to the person who knows them. Fractions are presented, both common and decimal, but so disguised that not the least likeness is apparent. Hence the rules must be repeated in such case, and thus in Bonnycastle’s Arithmetic appear three distinct rules headed as follows :—

**Rule of Three.**

**Rule of Three in Fractions.**

**Rule of Three in Decimals.**

These are applied, as before, mostly to commercial affairs, which we imagine are considered as forming a necessary preliminary to geometry, since the road to the Pons Asinorum is always made to lie through Agio and Banco, Interest and Discount, and the like. The final consequence is, that the pupil having worked unmeaning and useless questions by slatesfull for some four or five years, comes out master of a few methods, provided he knows what rule a question falls under, which is not always sure to be the case, for in all probability, the first application which it is necessary he should make will be a combination of more rules than one, and, therefore, not exactly to be solved by the rule in his book. And here he is fairly aground ; for not having any principles, the necessity of one step different from that laid down in the rule is a total extinguisher upon the success of his efforts. So much for the system of arithmetic, most appropriately called *cyphering*, since intellect goes for nothing throughout.

After the excellent preparation above described, such of the pupils as retain any power of comprehension, or have not been utterly bewildered in the labyrinths of cwts. and lbs. are made to commence geometry, or as it is called *mathematics*. Here we must observe, in justice to the instructors, that they have not degraded the latter term by applying it to their figure-work, miscalled arithmetic. And here the form of demonstration is adopted. We may ask, how comes it

that reasoning, utterly banished from arithmetic and algebra, preserved its place as an essential of geometry? We suspect it arose from the fact of the treatise of Euclid being found already established, and the disinclination to overturn any institution being so great, that this work preserved its place in spite of its truth and beauty. Had it not been for this, we suspect that geometry would have consisted in calculating the area of squares and triangles—in fact, that it would have been all contained in one of our practical works on mensuration. Even as it is, there are not wanting some contrivances to prevent the perfect mastery of reasoning. One is, to give the pupil a case of instruments, and let him spend his time in drawing figures, taking care that these shall consist of broad ink lines, to prevent his eye and hand from acquiring the incidental advantage of real accuracy. The propositions are also said by rote, for the convenience of those who find their memory in a better state than their reason. Many a youth who can *say* the first book of Euclid cannot say whether it would or would not do equally well to reverse the order of all the propositions. Great attention is paid to the phraseology of the book. The never-ending reiteration of Simson's Euclid is the very cream of the matter. But the prime feature of the system, though now somewhat obliterated, was the necessity for recollecting the numbers of all the propositions; for it could clearly be of no advantage to know, that three angles of a triangle are equal to two right angles, unless it was also known that this is the thirty-second of the first book. There seems to be a magic in numbers, which no one can withstand, from Leibnitz, who proposed to convert the king of China to Christianity, by means of the binary arithmetic, to the mathematical master of a country school, who measures his pupils' conviction of geometrical truths by their power of recollecting the order in which they come. In addition, it must be observed, that the more difficult parts of the system are, like the rest, said or sung after the manner of school-boys, without the least elucidation. The fifth book, which, though defended by many on account of its superior rigour, is pretty generally admitted to be very difficult, if not absolutely unintelligible to the young, shares the same fate. If geometry is at all connected with algebra, it is by means of false analogies and such jargon as that the algebraical theorem  $(a + b)^2 = a^2 + 2 a b + b^2$  proves the fourth proposition of the second book and why? because  $a^2$  or  $a$  multiplied by  $a$  is called the square of  $a$  and  $a b$  the rectangle of  $a$  and  $b$ , &c.! Under these circumstances, the inquisitors who condemned Galileo would not much object to

our geometry, seeing that such reasoning might be made as effectual in proving the stability of the earth, as the arguments of that great man were in overturning it.

We now come to the method of teaching algebra, with regard to which, all that has been already asserted in speaking of arithmetic, holds to its full extent. But as the former subject holds a higher rank than the latter, it would be undignified not to teach it with some defects peculiarly its own. If arithmetic were unintelligible, algebra is made to render that obscure which before was easy. The latter may be divided into two parts ; the first containing merely universal arithmetic, that is, calculations leading to theorems which are equally true for classes of numbers. To investigate these, universal numbers are introduced, represented by letters, for which, when the process is finished, any numbers may be substituted which are consistent with the conditions of the problem. The second and more extensive branch takes its rise in a peculiarity which distinguishes algebra from all other sciences, *viz.* that when a problem is impossible, or admits an infinite number of solutions, or has been misunderstood in applying algebraical reasoning, the solution itself, instead of being rational and consistent, points out the error

by appearing in one of the forms  $- a \sqrt{-a}$   $\frac{a}{0}$   $\frac{0}{0}$  and others

which the algebraist will immediately recognise. These symbols are contradictory and absurd in their nature, yet, by carefully observing the problems in which they occur, it has been made apparent, that each of them belongs to one particular species of mistake and to no others. Hence the solution itself points out the error and the mode of correcting it, and these symbols take their place by the side of those in which no contradiction occurs, and can be used with certainty, and, by those who know their meaning, without confusion of ideas. In employing them it is sometimes necessary to extend the signification of common terms to avoid separating analogous cases and multiplying definitions. It is plain that this refined branch of the science should not be the first taught, but that the pupil should be led, in the track of invention, to its several parts, so as to arrive at each at the precise moment when he can understand its origin and use. A contrary course will ensure years of travelling in the dark, besides the certainty of accustoming the young mind to implicit belief in apparently contradictory propositions. But as if this were to be desired, we find the most elementary parts of algebra crowded with numbers which are to be subtracted from nothing, the results of which are to be added

to and multiplied by similar numbers, for in no other sense can the pupil in that stage of his progress interpret the symbols which are put before him. This is on the supposition that he attempts to interpret them at all, about which no great concern is manifested. Thus, in Bonnycastle's Algebra (the school abridgment) we find the following definition :

" — *Minus*, the sign of subtraction, signifies that the latter of the two quantities *between which* it is placed, must be subtracted from the former." Six pages do not elapse, before we find the pupil directed to add  $+ 3x y$  to  $- 2x$ .

It may be said, that pupils raise no objections. This is the most fatal argument that could be adduced. We know well that pupils always receive implicitly what their masters tell them, and why is it that they are led to the study of Mathematics? Precisely that they may learn to raise objections, and how to raise them in the proper place, when false logic and absurd definitions make objections desirable. To make him turn a mill is not the way to restore sight to a blind horse, nor will a routine of unintelligible or contradictory propositions develop the powers of the mind.

As in arithmetic, so in algebra, there is no reasoning, but all is rule and work. Nay, even the instructor himself is not supposed to possess this faculty, since to all the works of algebra, a key is published, containing literatim the solutions of all the questions, simple and otherwise, and it is well known that no similar work will succeed without such an accompaniment. In the key to Bonnycastle's Algebra we find  $a-x$  multiplied at length by itself, for fear the instructor should slip; also the solutions of the equation  $4-9x=14-11x$ , and many other such.

In answer to a defence sometimes set up, that the system is *practical*, we observe that much of what is done has no reference to any practical end whatever. The great body of the algebraical work of a school consists in questions of multiplication and division which never occur in practice—above all, in the solution of certain conundrums called problems producing equations, of the *practical* nature of which the reader shall judge from the following specimens extracted from Bonnycastle's Algebra.

' A person being asked the hour answered that it was between five and six and the hour and minute hands were together. What was the time? '

' A post is  $\frac{1}{2}$  in the mud,  $\frac{1}{2}$  in the water, and 10 feet above the water; what is its whole length? '

' A person has two horses and a saddle worth 50*l.*; now if the

saddle be put on the back of the first horse it will make his value double that of the second, but if it be put on the back of the second it will make his value triple that of the first; what is the value of each horse ?'

Now if all this be meant for improvement in theory, no one will deny that the reasons of all the rules should be previously understood; but if they be practical questions, we need only say that people have more pertinent methods of answering the question 'What's o'clock?' that no one concerns himself about the proportion in what a post is shared between wind, water, and mud; and that the Newmarket gentry have a better way of determining the value of their horses than by involving them, saddles and all, in a simple equation.

Such is a general outline of a course of elementary mathematics which was universal, and is still too general. We do not mean to charge every place of education with every one of these absurdities. It would be monstrous to suppose that, however universal the prejudice may be against reasoning, all should have adopted exactly the same method of keeping it out of the way of boys. We proceed to offer some suggestions as to the manner in which this system should be improved, in doing which, we cannot assume the tone of certainty in which we have hitherto proceeded. All that has been stated hitherto is notorious fact; we now come from matter of evidence to questions of opinion, knowing that it is more easy to pull down than set up, though feeling convinced that the following methods will be found more profitable than those which we have described.

It is useless to present reasoning in any shape until the language used is perfectly familiar. No one can learn new words and comprehend new combinations of words at the same time. Hence a perfect acquaintance with the English sentence is the first thing to be taught. In this knowledge boys are usually deficient. They know, it is true, how to name each part of speech; but they have no acquaintance with that more general part of grammar which is the foundation of the forms of logic. As an example, no mistake is more common than concluding the converse of a proposition to be the same thing as the proposition itself in every case where the terms are new or complicated. Thus in commencing geometry they suppose that 'all equilateral triangles are equiangular,' proves that all equiangular triangles are equilateral. These errors should be guarded against beforehand, by exercising the pupil in simple deductions, such as are to be found in every syllogism, taking care that all the terms

used have reference to objects with which they are familiar. It should be illustrated to them that the truth of an argument depends on two distinct considerations, the truth of the premises, and the manner in which the conclusion is deduced from them. They should be made to see the difference between a fact and a deduction from two or more, and also that good reasoning may be instituted upon data which are imaginary, such as the definition of a point and a line in Euclid. It is much to be regretted that no book exists in our language which can be recommended to children as a direct exercise of thought on subjects with which they are familiar. He who shall supply this desideratum will deserve more than the present age will be willing to allow, but may safely trust his fame to succeeding generations. For want of such a previous exercise the boy has to contend with two difficulties at once, new things and new methods; and education is not what it should be, a search after that which is not known, by the light of that which is. We proceed to the study of arithmetic.

The method of numeration should be clearly explained and illustrated by reference to other systems besides the decimal. By the use of counters or any similar mechanical means, the pupil would readily perceive the use and advantage of giving to figures a local value. The explanation of the four principal rules would then be easy, but in learning them for the first time the pupil should not be allowed to make use of the abbreviations which will afterwards be convenient for practice, and which all consist in the omission of cyphers. The arithmetic of concrete quantity would furnish abundant illustration of these rules, since the principles of all parts of the science are the same. The rule for finding the greatest common measure of two numbers will supply an example of logical argument, which should be repeated on several distinct examples. In fact the learner should accustom himself to apply to every case those principles of reasoning which in algebra are generalized by the application of universal symbols for numbers. He will thus smooth the road to the latter science, which will present only one new feature at first. In teaching fractions, a perfectly correct notion of their meaning should be given, illustrated by examples taken from concrete quantities. Distinct things should not be confounded because they have the same names. The multiplication and division of fractions is an example. Strictly speaking, the definitions given of these words can apply only to whole numbers, or to a whole number and a

fraction ; the name is extended *after* that operation is discovered, which it will be necessary to substitute when fractions take the place of whole numbers in a problem, and not till then, should the student be allowed to use the terms as applied to both sorts of quantity. The transition to decimal fractions is simple and obvious ; but the pupil, before he is permitted to change the notation, should be accustomed to work questions contained in decimal fractions expressed in the common way of representing all fractions. The reduction of any fraction to a decimal will lead to the notion of what is called a circulating decimal, which is all that the pupil requires, as the rules may very safely be deferred until he understands the nature of a geometric series.

The commercial rules are simple applications of the very first principles. They may be introduced as examples of the others, and thus many long and distinct processes found in all the books will be reduced to two or three. We have not space to enter into further detail ; the following remarks will close this part of the subject.

The object of the master ought to be to make his pupil understand the process before him. The latter ought therefore to be questioned on every part of his work, and encouraged to mention all the difficulties which have occurred to him. Above all, the boy ought never to be suffered to imagine that he is stupid, because he does not immediately see what is put before him. Schoolmasters do not sufficiently bear in mind, that their pupils are learning to use faculties, with regard to which, were it not for instruction, all would be nearly on a level. To discourage a beginner, by making him fancy himself beneath the rest of his species, is the surest way of losing time and trouble. That inattention or negligence should meet with reproof is undeniable, but this should not come in such a form as to dishearten the well disposed, or to give the indifferent pupil an excuse for making no progress, by laying the blame on his faculties, and saying he has no head for arithmetic.

Numerical exactness is of the utmost importance, and will be sooner arrived at by the pupil who understands the principles, than by any other. The greatest difficulty which boys find in attaining it, arises from the custom of writing all the figures on a slate, on which (since beginners in arithmetic rarely write well or evenly) the various columns of figures are mixed, and slant in every possible way. Why should not the young calculator employ the same method as is frequently used by the older one, of writing on paper ruled into small

squares, one for each figure. Let this be tried, and we will answer for a much better average rate of correctness. As soon as the principle of each rule is really understood, skeleton forms might be used with advantage, by which the pupil might be required to abide.

The study of geometry should, in our opinion, not be deferred one moment later than is absolutely necessary. Many of the names here are new, and the beginner should be made very familiar with them, before he encounters the difficulties of a demonstration. This might be attained, by making him previously acquainted with the leading facts of the first three books of Euclid. It is easy to give ocular demonstration of them all, and this, while it fixes the terms in the memory, will excite curiosity, and give an idea of the utility of the science. Much depends on the manner in which a study is introduced, and the commencement of Euclid's Elements is not calculated to afford a favourable idea. It consists of multitudes of definitions and axioms, some of which are far from self-evident, and begins with three troublesome propositions, showing that from the greater of two lines a part may be cut off equal to the less. This may be very necessary to the received standard of geometrical rigour, but the beginner cannot enter into this refinement. And in fact, the order of the propositions is not necessary to correct reasoning. This consists in forming the conclusions rightly from the premises, no matter what these last may be. It would not be contrary to good logic, to assume the whole of the first book of Euclid, and from it to prove the second, provided that afterwards the first book were proved, without the necessity of taking for granted any proposition in the second. The argument, or collection of arguments, would then stand thus:—

If the first book be true, the second is true.

But the first book is true.

Therefore the second is true.

The order in which the premises come, does not affect the soundness of the conclusion, and provided the pupil understands, that the conclusion depends equally on the premises and the reasoning grounded upon them, which are two distinct things, an error in one not necessarily affecting the other, he is perfectly safe, and takes a view of the process of reasoning not generally given to the young. We should then recommend the following principles in teaching geometry:—

Never to state a definition, without giving ocular demonstration, of one or more facts connected with the term employed.

To defer every axiom, until that point is arrived at, where it becomes necessary.

To impress upon the mind of the pupil, that the reasoning is not affected by the assumption of an axiom to be proved afterwards, provided the proof of it is independent of the proposition which it was used in proving, and its consequences.

To accustom the beginner to retrace his steps, and going backwards from any proposition, to continue the chain, until he arrives at the point which he set out by assuming.

To supply a proof that 'all right angles are equal,' and to deduce the axiom on which Euclid grounds the theory of parallels, from this more simple and obvious one, viz. 'through a given point, not more than one parallel can be drawn to a given straight line.'

To count the second and third proposition of Euclid among the axioms.

To omit those propositions which are not subsequently useful, among which may be reckoned many in the second book, and all in the fourth.

In order to accustom the pupil to correct statement of propositions, he should be made to write all that he reads. But here is a probability that he will trust entirely to the book. This may be prevented by requiring him to use numerals instead of letters throughout, and to arrange the whole in the following manner. Let a sheet of paper have two vertical columns, ruled on the left, and let the whole enunciation, construction, and demonstration of the problem be divided into distinct paragraphs, each containing only one assertion. Number these paragraphs in the first ruled column, and, in the second, opposite to each paragraph, enter the numbers of the preceding ones from which it follows. Where a previous proposition, or an axiom is required, write its enunciation at the end, with a letter before it, and enter that letter opposite to the paragraph in which it is assumed. If the pupil does this correctly, the instructor may be well assured that he understands the proposition.

In the application of algebraical symbols to geometry, misconceptions usually prevail, which are countenanced by the looseness of expression of many elementary works. They are mostly founded upon the analogy existing between the algebraical expression  $a \times a$ , or  $a^2$ , called  $a$  square, and the geometrical square described upon the line which contains  $a$  units. Against this confusion of terms the teacher must be on his guard, and should carefully avoid that symbolical

notation recommended in some books, by which  $A B^2$  is made to stand for the square described on  $A B$ . If a short symbol for this be used it might be  $\boxed{A B}$ , and the necessity of proving that the number of  $\boxed{1}$  is contained in  $\boxed{a}$  is  $a \times a$ , would not be concealed under a *petitio principii*.

With regard to the fifth book of the Elements, we recommend the teacher to substitute for it the common arithmetical notions of proportion. Admitting that this is not so exact as the method of Euclid, still, a less rigorous but intelligible process, is better than a perfect method, which cannot be understood by the great majority of learners. The sixth book would thus become perfectly intelligible.

It would much benefit the pupil if solid geometry were introduced at a more early period. There is nothing in the elementary propositions which requires more than the first book of Euclid; and by a judicious use of the *real* figures instead of perspective drawings, the subject might be amazingly simplified.

We now come to the subject of algebra, regretting that the limits of this article will not permit us to discuss the subject upon the scale which it deserves. The great drawback to the proper attainment of this science is the miserable previous instruction in arithmetic. When this defect is remedied, and not till then, can we expect any better results. The four primary rules are, in principle, only extensions of those of arithmetic, though, taught as they are, very little resemblance appears. It is the practice also, not to let the pupil proceed to the principles of equations, until he can work questions in all the previous rules, of a nature which very rarely occur in practice. To the unintelligible way in which the negative sign is used, we have already alluded. We proceed to explain our views as to the manner of proceeding.

The new symbols of algebra should not be all explained to the student at once. He should be led from the full to the abridged notation, in the same manner as those were, who first adopted the latter. For example, at this period he should use  $aa$ ,  $aaa$ , &c., and not  $a^2 a^3$ , and should continue to do this until there is no fear of that confusion of  $2a$  and  $a^2$ ,  $3a$  and  $a^3$ , &c., which perpetually occurs. Whenever any new symbol is introduced, not a step should be made until it has been rendered familiar by finding its arithmetical value in particular cases. This indeed is the first exercise; algebraical expressions increasing in complexity are given, and also

certain values for the letters, and the student is left to find the corresponding arithmetical value of the expression. Whenever a negative result occurs it should be thrown aside as an impossibility, the pupil being told at the same time that use will be afterwards made of such expressions, when he can understand what they mean in the solution of a problem. The leading principles of the solution of equations of the first degree might then be easily established, and applied to some numerical equations. The four rules should follow, the principles being previously explained and all negative results avoided. The student is then in possession of the means of solving an equation of the first degree in which some of the given quantities are literal, and may be supplied with examples a little more likely to aid his future studies, than the conundrums about posts and saddles, which we have instanced.

At this stage of his progress the pupil should be set to work a problem in which a negative result occurs. It should then be pointed out to him that there is a misconception of the problem itself, and the manner of rectifying that error will shew in the course of several examples, what is the meaning of the negative answer. At the same time it will be easy to explain by examples the nature of the wrong sup-

positions which lead to results of the form  $\frac{a}{0}$  and  $\frac{0}{0}$ . He

should then examine for himself what change is produced in a process which sets out with some assumption as to  $b-a$ , when this has been incorrectly written for  $a-b$ . By comparing the true and false processes he will deduce the rules according to which negative quantities must be treated, in order that their introduction may not affect the soundness of the conclusion. He is thus placed in the same condition as to results with the pupil who has pursued the common method, with this difference, however, that he can explain conclusions which the other cannot, and has never believed that,  $a-b$  meaning  $a$  diminished by  $b$ , there can be such a thing as  $-a$ , or a quantity *less than nothing*.

The view which is generally taken of expressions of the first and second degree is too confined for the future purposes of the mathematical student. It is this: what values of  $x$  will make the expressions  $a x-b$ ,  $a x^2-b x+c$ , &c., equal to nothing; whereas it is necessary to inquire what values of  $x$  make these expressions positive, negative, or nothing. All that is learnt, appears to have no higher view than enabling the student to solve the pretty problems which we have men-

tioned, and not to simplify the higher parts of the science. This is too much the fault of the education of our schools in general. It is not recollect that they cannot expect to make learned men; but they may make good learners, and at the same time produce such a desire for knowledge as shall lead the individual to devote himself to study, where it is not matter of compulsion, as in the Universities, and still more amid the occupations of life. The great mistake lies in a notion that they are to teach the greatest possible number of bare facts, before the pupil arrives at the age of sixteen: whether he will leave school, with the desire of adding one more bit of knowledge to his stock, or with the power to do so if he has the will, does not seem to be considered of any importance. Again we call upon all who still adhere to the old system, to reflect a little on their own interest. The number of new methods of teaching proposed every day, shows the existence of a general feeling that some change is requisite. The Universities, which have made great advances within the last twenty years, may be proposed to the schools as an example for their imitation. And let them recollect, that, the demand existing, the question is not whether they will supply what is asked for, or something else, but whether the public must come to them, or go elsewhere.

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#### CHARITY SCHOOLS.

THOSE who are desirous to promote the education of the poor have frequently been at a loss to reply to one of the objections advanced by persons who consider their exertions useless or injurious. It has been said, that notwithstanding the many provisions for imparting the supposed benefits of instruction to the lower classes, their ignorance of what is useful has continued almost undiminished, whilst their pretensions have been very much increased. The boys educated in the different Charity or National Schools are often, it is alleged, found to be unwilling to engage in, or unfit to undertake, the kinds of work most suitable to their condition, and by which they ought to live; whilst the girls, who have been taught to read and write, and to solve arithmetical questions, do not acquire the smallest acquaintance with many things most essential to their comfort, and most adapted to their probable station as servants or as the wives of working-men.

Without placing implicit reliance on the general complaints of the deterioration of the character of servants in general,—

complaints which a recollection of similar murmurs heard from the lips of the oldest people concerning what they supposed to have taken place in *their* days, as well as a reference to details of domestic life in centuries that are passed, will show to be little more than repetitions of old discontent ;—it must yet be acknowledged that there is some truth in the representations, so generally made during late years, that many boys who have been well educated incur disappointment and ruin on account of their being unaccustomed to habits of humble industry ; and that it has become difficult to procure female servants who will undertake the harder kinds of work. Too many of the boys aspire to be clerks or shopmen, and too many of the girls to be governesses, lady's-maids, or nurse-maids. There is not a town, or a village, in which the settled inhabitants cannot point out many young women whose humble origin would formerly have led them to offer themselves as servants, but who have been observed of late years to despise such a mode of supporting themselves, and to give a preference to the more precarious, and in their estimation the more genteel, although probably not in reality the less laborious, employment of dress-making. The number of dress-makers, thus increased far beyond the demand of parts of the country in which changes of fashion are not made with great rapidity, has led to worse consequences ; by exposing a number of young women to all the temptations and evils which idleness and a fondness for finery induce, and from which less pretending occupations would have protected them. Those who have opportunities of closely observing the state of small communities, and the changes they undergo, will assent without difficulty to these remarks ; and there is much reason to believe that the prisons and penitentiaries of London would furnish numerous illustrations of them.

These admissions may be made without prejudice to the cause of general education ; but they lead to the conclusion that the plan of education, pursued with respect to boys and girls of the lower classes of society, is unsuitable to their present and their probable future condition, and also incomplete.

In the charitable provision made for the education of the poor, either by the state, or by the bequests of benevolent individuals, of which few towns throughout the kingdom are entirely destitute, the object of the provision has varied little, even in the multiplicity of individual feelings in which the foundations may be supposed to have originated. The schools chartered by the state were, it is but reasonable to presume, intended for the benefit of the poorer portion of the

middle classes ; and those founded by individuals were in some instances intended to promote these views of the government, in others to hold out peculiar advantages to a proportion only of the poorer and still more neglected class of people ; and in a few, for the sole purpose of enabling poor children ‘to read well in the bible.’ (Fox’s School, Cleobury Mortimer, Salop.)

The public or grammar schools, being instituted on nearly an uniform plan, have in some places risen above their original design, and in others fallen below it. Indeed the objects intended by the founders were seldom very precisely stated, and have often been matters of dispute. It is often stated that the boys are to be taught ‘in learning and good manners ;’ or, ‘in grammar and other good learning ;’ or merely, in general terms, that boys are to be ‘freely and carefully taught and instructed,’ or ‘piously educated ;’ or instructed ‘in religion and other good literature.’ Subsequent to the Revolution, more care is observable with respect to making religion a part of school education : thus in the free grammar school in the borough of Chesterfield, which Elizabeth had founded ‘for the pious education of the same,’ a later gift, in 1690, directs that the boys should learn ‘the accidence and the assembly’s catechism ;’ and during the eighteenth century most of the directions are particular as to the education of youth according to the Protestant religion of the state.

It would evince great ignorance of what has been effected by their means to speak of the grammar and free schools in terms approaching in the slightest degree to disrespect. They diffused learning over the land at a time when various circumstances would have debarred from its advantages all but the inhabitants of cities, and mainly promoted the first circulation of knowledge, and the cultivation of liberal and enlightened habits of thought and feeling, through all parts of the kingdom. That they are now less useful, has arisen from the altered state of society. In the larger towns, they have become places of classical education, and resorted to by scholars of a higher class than those for whom they were first intended. English reading, writing, and arithmetic, form perhaps no part of the plan of instruction, and a knowledge of Latin is deemed an essential condition of admission. In towns of moderate size, these regulations materially limit the utility of the school : as, for instance, at Chesterfield, where it appears there has sometimes not been a single boy at the school. (Report of Public Charities, vol. xviii., p. 149.) In some places, (as at *Ripon*,) the free schools are decaying,

in consequence of the indifference of the poorer classes to Latin and Greek, and their unwillingness or inability to pay for Latin books, and for instruction in reading and writing. That they are anxious for the latter kind of instruction is shown by their sending their children to the national and other schools; as well as by the fact, that in the free school founded by the Hon. Robert Boyle, at Bolton in Yorkshire, in 1697, where writing and arithmetic are only taught during six weeks before midsummer, the number of scholars during that time is generally doubled. (*Reports on Public Charities*, vol. iii.) The scholars of these particular schools, thus desirous to obtain the simplest instruction, are the children of poor persons, for whom it may perhaps be said the schools were not intended. But people of the middle classes in small towns equally feel the hardship of having to pay for that kind of education which their sons cannot do without, and having that held out to them as a boon of which they with good reason very much question the utility. A poor tradesman has sometimes an ambition to see his son a scholar; but the majority of poor tradesmen would wisely prefer that their sons should read well, write a good hand, and understand accounts. This has been taken into consideration in many instances; and the schoolmaster is willing to teach Latin to those who desire to learn Latin, and English to those who desire to learn English; as well as writing and arithmetic. Where such considerations have been overlooked, the schoolmaster either holds a sinecure, or keeps a school full of scholars who pay for their education; or, worse than this, a small number of boys, chiefly the sons of persons in good circumstances, are taught Latin and Greek at a very disproportionate expense. The annual expense of St. Paul's School, founded by Dean Colet, in 1508, 'for the instructing of boys in good manners and literature,' is about 6000/. and the number of scholars, instructed in classical learning, is 153. By the statutes of St. Paul's School, drawn up by the founder, it is directed that there shall be taught in the school children of all nations and countries indifferently, to the number of 153; that at the time of their admission they should be able to say the catechism, and to read and write competently, and that they should be taught good literature, both Latin and Greek, 'and good autors, that wrote theire wisdom with clean and chaste Laten, other in verse or in prose;' the founder's intent being, 'by this scole specially to increase knowledge and worshippinge of God and our Lord Christ Jesus, and good Christen life and manners in the children.' (*Report of the Commissioners*, vol. iii., p. 237.) This kind of

education does not differ enough from that prescribed in other schools to afford a fair inference that the school was only meant for the higher classes : and although it is prescribed that the children are not to burn tallow candles in the school, but *wax*, at the expense of their friends ; yet there is also mention made of the *poor* scholars of the school. The expense of the wax tapers is seldom incurred ; and in the absence of specific directions, boys are taken into the school from every class ; generally, however, with some regard to the probability of the education given being useful to those selected. The boys receive a complete classical education. In addition to nine exhibitions of 100*l.* each, left by Lord Campden, the Mercers' company, who manage the estates and property of the school, have appropriated 450*l.* of the revenues to establishing nine other exhibitions of 50*l.* each.

The funds might doubtless be better applied than even in the distribution of such expensive rewards for boyish competition as medals worth 20*l.* each, causing an annual charge of more than 200*l.* ; and *much* better than in courts and committees, which alone cost nearly 300*l.* a year. The sums of nearly 500*l.* for surveyor's expenses, and upwards of 600*l.* for law, may be looked upon as merely incidental to the year in which the commissioners made their report ; but they show the sums available to purposes more beneficial to the public.

The regulations of all the free or charity schools of this country, the grammar schools excepted, comprehend however no more than an obligation on the schoolmasters to teach reading, writing, and arithmetic ; and as in many of these schools girls and boys are taught together, an occasional but not a constant addition in these cases is, that the girls should be taught to sew and knit : the boys are sometimes included in this provision ; and it is often further specified that the children should be diligently instructed in the church catechism. The education of women in the higher ranks in this country, which had previously been more careful, became so little attended to after the Revolution, that this range of acquirement was quite equal to that possessed down to the middle of the last century, or later, by the daughters of country gentlemen ; and as the number of children benefiting by all the charity schools put together was very limited, the benefit had chiefly the effect of encouraging a portion of the younger part of the population to general improvement, which would of course commonly be followed by an improvement in their prospects and condition. It is the extension of the benefit, without a proper modification of it, which seems to have been productive of mischief.

With respect to boys, it is found that certain encouragements to the acquirement of a learned education are afforded, sometimes to a small number, and sometimes to one, in different parts of the country; not unfrequently according to the testimony of old gentlemen who died childless, and wished to leave some provision for the instruction of others in that kind of learning which had probably been the solace of their retired hours and declining years. Such solitary bequests may occasionally have been the means of aiding and advancing a youth of talent, already distinguished at a country school; although they have too often merely conferred a little useless learning on those whom the acquisition prohibited from that cheerful industry which would have procured them independence and comfort, and consigned for life to the duties and hardships of a poor and neglected curate and village schoolmaster. In some places (as at Halsham in Holderness), the provision for a classical education, although connected with a scholarship, has not been taken advantage of. In such districts nobody wants that particular kind of help, or nobody wishes for it.

The encouragement given to education, and consequently the facilities of obtaining it, have, during the last fifty years, increased beyond all calculation. There is not a town, there is hardly a village or hamlet in England and Wales in which some charity school has not been instituted; and of these a considerable proportion are founded on what is termed the national plan. Whilst the number of poor children who receive instruction has thus, however, been greatly increased, it has followed, almost as a matter of course, that there have been many among them who have experienced much disappointment. When few could get instruction in reading and writing, those who could were sure of obtaining the best kinds of employment. When the number of the instructed became increased, *the nature of the instruction remaining the same*, there were many who were necessarily unable to obtain those kinds of employment which had until then been regarded as the sure recompense of some skill in writing, and reading, and accounts. Formerly, if a poor boy broke a leg or an arm, or was sickly or deformed, efforts were made by his parents to give him the advantages of the common school education; and instead of being made a blacksmith or a shoemaker, he became an attorney's writer, or a clerk to a merchant, or perhaps a schoolmaster. Now, when every poor boy in the village can read and write, and knows arithmetic, they cannot all be writers, or clerks, or schoolmasters; some must be blacksmiths and some shoemakers; and until the benefits of education have been fully enjoyed by one or two generations, some remains of the first dissatis-

faction felt on this account will probably prevail. But the dissatisfaction may be lessened, and several bad consequences found to arise from it removed, or at least prevented for the future, by *changing the kind of instruction that is given*. That which was formerly held out as a charity, was intended to lift the few who were fortunate enough to obtain it from the sphere in which they were born to a higher; it was held out to few, and the effects of such encouragement produced no inconvenience. That the same advantages, or the same kind of encouragement, being now held out to *many*, must be inconvenient, may be easily supposed; and the inconvenience of the fruitless aspirations it gives rise to is aggravated by the positive disqualification, arising out of such a system of education, being extended to those who can only live and thrive by manual labour, to which, in the many years devoted to education, they are in no degree habituated.

It is really surprising to observe how seldom this very plain view of a subject, which has occupied so much attention, has been taken. The places are very few in number in which any additional regulations have been made in schools with the direct object of fitting either boys or girls for those stations which they are likely to fill after leaving the schools. Where such an attempt has been made, as in the charity school of the parish of St. Mary-le-bone, London, established in 1750, for the education of girls and boys, that part of the plan which related to the boys has been subsequently abandoned. There are evident difficulties, especially in large towns, in the way of so enlarging the common education of boys as to include instruction in different kinds of useful labour. The household occupations suitable to girls may be provided with less difficulty; and no charity schools have perhaps been so useful as those of which the object has been to qualify girls for becoming servants; for a good female servant will generally make a clever and useful wife for a working-man. These schools are not even yet very numerous. There is an excellent one called Cogan's Charity, at Kingston-upon-Hull, founded by Alderman Cogan in 1753, for the children of poor people of good character. Each girl remains three years at the school, and is accustomed to knit and sew, and in her turn to wash and do all the work of the house. They receive 20s. on leaving the school 'for fitting them with necessaries for service,' and as an inducement to a perseverance in good conduct afterwards, a small marriage portion is given to those who apply for it, and bring proofs that they have conducted themselves well in their places. Although for the twenty years ending in 1822 there

were never fewer than twenty girls in this school, it is remarkable that only eight or ten out of the whole number had applied in that time for the marriage portion (about 6l.\*). This may perhaps be regarded as a proof that the majority had so far profited by their good education as not to be without the means of commencing housekeeping when they entered into the state of matrimony.

Schools for female servants have, we believe, become more general during the last ten years. There is one at Cheltenham, which is considered to have been very useful; and the Brighton Asylum for Poor Female Orphans, wherein the girls are lodged, boarded, and clothed, as well as 'regularly trained in such habits of industry as will tend to make them useful servants,' is one of the most excellent charities of that populous town. The benevolent persons who act as the committee of schools of that kind would do an additional service to the community if they would enter, in their annual reports, a little more into detail concerning the plan of instruction, and the effects of it, as far as they may have been observed. This might be done without adding to the expense of the report, if the names of the patrons and trustees were printed in somewhat humbler type, and those of the charitable subscribers expanded over not quite so large a space. In the Brighton school, the number of girls is seventeen. The school was established in 1823, and five girls have been placed in services, all of whom have maintained an excellent character.

The Mary-le-bone charity school, instituted at a time when that parish, now containing upwards of 100,000 souls, was little more than a village, was designed 'for instructing, clothing, qualifying for useful servants, and apprenticing, the children of industrious poor parishioners.' A grant from the Countess of Oxford in 1754, and various donations, legacies, and subscriptions since that time, enabled the trustees to enlarge the plan of it, until sixty boys and sixty girls were clothed, educated, and maintained in it. The boys' school was carried on for some years, but unsatisfactorily, and was then abolished. In 1830, the number of girls was increased to 100. 'The girls are taught to read and write, and are practised in such rules of arithmetic as the trustees think necessary; they also learn plain-work, and regularly assist in performing the domestic offices of the house, that they may be trained to the habits and duties of useful servants. Above all, they are carefully instructed in the knowledge of their

\* Reports on the Public Charities, vol. ix.

religion and the practice of its duties.' Girls are admissible into this charity between the ages of nine and eleven, and they leave the school at fifteen ; receiving on that occasion a bible, a common-prayer book, a short formulary of private prayer (Bishop Bloomfield's), and a printed exhortation to the proper discharge of their duty. If, within three years after leaving the school, any girl produces a certificate of having remained in the employ of one master or mistress for the space of two years, the sum of two guineas is given to her, as a reward, and an encouragement to continued good conduct. The same reward is given if, within five years, a certificate is produced of her having been in two employments for periods amounting together to at least three years : and in either case, it is of course required that they should have conducted themselves honestly, soberly, and diligently. During the time the girls are at the school, they are required to rise at six o'clock in the morning from Ladyday to Michaelmas, and at seven during the other six months of the year. They retire to rest at eight in the evening, except in June, July, and August, when they sit up till nine. They are accustomed to make their own beds ; to clean their own knives and forks, and shoes ; and to be scrupulously clean in their dress. Prayers are read to them by the mistress in the morning and evening. Their chief employment is needle-work, but they are employed in rotation to clean and scour the school-rooms, the play-rooms, and the washing-rooms, the tables, forms, and stairs, as well as to prepare and remove the meals of the rest of the scholars, and to wait upon the domestic superintendent and officers : they are allowed to visit their parents or friends on six separate days in the year, under certain restrictions, the object of which, as of all the regulations, is to preserve them from irregularity, and every kind of danger arising from bad company and bad example.

The value of charities of this description is too obvious to require particular comment. By establishing *good habits*, they doubtless accomplish more than can ever be effected by mere precept ; and they not only tend to make useful servants, but provident, neat, and intelligent wives and mothers. If it were possible to engraft some part of such a system on the national and other schools, these advantages would become generally diffused, and the consequence would be a great increase in the comfort of the houses of the poor, and an accompanying contentment, productive of the best results on the character, among young married men of the working-classes ; whom the extravagance or mismanagement of untidy

and ignorant partners often drives to ale-houses, and other resorts of idleness and dissipation. In some parts of the united kingdom the neglect of the common and useful parts of education is still more striking than in England. Girls who have passed through the charter schools of Ireland have been found to read and even to write pretty well, but unable to ‘hem a handkerchief or mend their own stockings\*.’ We cannot wonder, therefore, that they often become objects of derision to their fellow-servants, and are considered to be ‘so ill taught and so ill qualified, that not even the offer of a bounty would tempt the commonest farmer to receive them.’

The evils of the English schools are not exactly of this nature; but they are still such, even as regards girls, as merit serious attention, and the education of the boys is still more open to objection.

Among those who have endeavoured to secure the advantages of education to the lower classes without the evils arising from ignorance of common things, the name of Mr. Montagu Burgoyne deserves to be honourably mentioned. In an ‘Address to the Governors and Directors of the Public Charity Schools,’ lately published, he states, that in the course of his inquiry into the subject, he has visited almost every place either of refuge for the distressed, or punishment for the vicious, and has found a considerable portion of the juvenile sufferers or delinquents to consist of boys and girls educated in the national schools, and who had come to London from different parts of the country, in hopes of *bettering* themselves. It is melancholy to reflect on the number whom London receives into its vast population every year, to encounter disappointment and distress, and to fall sacrifices to disease or crime. Of these, with the exception of the Irish poor, the majority have learned what is commonly taught at school, but nothing more: having reached the age of fourteen, they know no trade, and are uninstructed in any occupation by which they can get a livelihood: they fancy that being better educated than their parents they must assume a higher station, and learn too late, and by ruinous experience, that such attainments as they possess have become common, and do not supersede the necessity of manual labour. The only cure for this great and increasing evil would certainly seem to be, making some additions to the ordinary education of those whose prospects and character suffer so greatly under the present plan. The object of all education is to fit those who are educated for their duties in

\* First Report of the Commissioners of Irish Education Inquiry, p. 23.

society; and if a system is generally acted upon of which the effect is *not* to prepare, but actually to disqualify, those educated according to it for the duties on which their usefulness, their independence, their content and happiness depend, the error is serious indeed. If the charity of the higher classes is perverted into an instrument of national evil, that charity ought to be better directed, or altogether withdrawn. For an erroneous system of education, productive of discontent, vice, and unhappiness, something must be substituted by which such results, the increase of which is inconsistent with the safety of human societies, may be checked at once, and effectually prevented for the future.

Every plan proposed with such views merits respectful consideration. That of Mr. Montagu Burgoyne, which is in operation at Potton, in Bedfordshire, is recommended by its simplicity and its apparent utility. The children are not only instructed in reading, writing, and arithmetic; but half of the school hours are spent in works of useful labour and industry. The boys mend their own clothes; they clean and mend their own shoes, and are taught to clean knives, and to use a hammer, and to dig and garden, and hedge and ditch, and even to plough. The girls are accustomed to the most useful kinds of needle-work; are required to mend their own clothes, and learn the business of a house and dairy. Thus prepared, both the boys and girls will be found able, when they leave the school at fourteen years of age, to earn an honest living. The boys, instead of expecting employment as clerks or book-keepers, will be active and useful farming servants, or grooms, or coachmen, or valets, or gardeners; or apprentices to different trades; or intelligent soldiers and sailors, able to profit by the advantages and to contend with the difficulties of any station or circumstances into which they may be thrown. The girls, instead of aspiring to be milliners or lady's-maids, will be active and clever housemaids, dairy-maids, or cook-maids; and, when they marry, will be able assistants to their husbands, and acquainted with the best way of preparing food and clothing for a young family. Poor as are the labouring men of this country, their comforts might often be greater than they are, if their wives were not utterly ignorant of the best mode of laying out the little that is earned by the husband's labour. Both provisions and clothing, although often wanting, are also often wasted in the humblest cottage; and whilst everything is commonly bought at the greatest disadvantage, there is so much ignorance of brewing, baking, cooking, and all useful domestic arts, that what is called comfort is too often quite unknown.

to the weary labourer at the end of his day's work, or to his ignorant and helpless wife at any time. It would be wrong to ascribe all their discomforts to an erroneous education, but certainly a different education would go far towards removing them, and towards making the humblest cottage of an honest man a comfortable home.

The benevolent individual to whom the school at Potton owes its establishment has zealously endeavoured to interest the neighbouring agriculturists and horticulturists in its success ; and has greatly enlarged the means of carrying the great principle of the school into effect. A field is allotted to hedging and ditching, levelling land, &c. ; different methods of cultivation, and other experiments are occasionally tried. There is a nursery-garden in which the boys are taught the different kinds of budding and engrafting, and other horticultural knowledge ; from which it may readily be supposed that many of them are likely in the course of their lives to be materially benefited. A working-man who does not depend on a garden for his subsistence may derive much happiness from knowing how to cultivate it ; and, pleased with an employment innocent in itself, and ornamental to his dwelling, may devote those hours to it which would otherwise be very idly or unprofitably spent. The female scholars, also, might usefully acquire a knowledge of the cultivation of fruits and vegetables, the cheapest and best luxuries of the poor man's table.

Little encouragement will probably be required to induce the parents of poor children to send them to schools of this kind ; but as a further incentive, it is intended at Potton not only to allow the boys to be engaged in work for which they are paid, when such work is to be had, and to allot small portions of land to those children who conduct themselves satisfactorily, but further allotments are allowed, at a low rent, to the parents of those children whose conduct or proficiency distinguishes them above their school-fellows ; which allotments are taken away when the boys or girls cease to behave properly. The parents are also to have the benefit of getting milk from the dairy at a low price ; as well as to send their bread or pies or puddings to the school oven once a week ; or to brew in the copper ; regulations which none will ridicule who know how difficult it often is to introduce the most undoubted improvements, or even to benefit the poorer class of persons in a way to which they have not been accustomed.

In the formation of any school whatever, it is essentially necessary that the founders should consider the actual wants

of that part of the community for whose benefit the school is designed. The object of charity schools is to form industrious, honest, and intelligent working men and women ; and this object will be best obtained by combining with the ordinary elements of school education, an acquaintance with some certain means of obtaining a livelihood. Such an object is, perhaps, one of the most important that can occupy the mind of those benevolent persons whose zeal is the cause of zeal in others. Whether we regard the amazing sums annually devoted to purposes commonly esteemed charitable, or the spirit with which such vast means of relief are distributed, we cannot but feel surprise when we contrast these great and good exertions with the indigence which yet infests every corner of the land, and with the ignorance in which so many of the working people are found whenever particular events make them prominent objects of attention. To go no further for examples, the late trials of disturbers of the public peace have disclosed the most striking evidence of the latter of these circumstances, if not of both. The evident conclusion is, that a large part of the funds of charity is mispent, and that much of the care and attention of the patrons of education is little better than thrown away. The *people*, who are the persons for whose comfort and direction the generosity and superintendence of the rich seems to be so actively exerted, are found to be a prey to destitution and discontent, led away by itinerant orators, and engaged in crime by unknown leaders ; persuaded to rise against many who are their constant friends and benefactors, and to do all in their power to effect objects which if effected would ruin them.

These are truths that invest the homely object of charity schools with the deepest interest, and make it the duty of all who exercise either a direct or indirect influence over these well-intentioned institutions, to examine into the working of the present system, and to inquire whether it may not be amended. The full blessing of charity can only descend on the poor when it is so directed as both to enable the poor man to become independent, and to excite in him the wish to be so. To effect the first part of this great object is the intention of friendly-societies, savings-banks, and self-supporting or district dispensaries ; even that cannot be fully attained unless the poor man's education has given direction to his strength and skill to his industry ; and the second part of the object, the creation of a wish to depend on his own exertions, can be effected by education alone.

No error, however, is more common, than that of considering education to be at an end when boys and girls leave

school. Under the present system, the most important part of education is then but beginning; and under any system, much will remain to be acquired and done when the school days are over. To imagine that the morals of the working-classes can be insured by the mere institution of schools of *any* kind, is to know little of the circumstances to which they are continually subjected. Without some superintendence of those who have passed through the charity schools, at their outset in life, all the benefits of the previous care bestowed upon them are soon lost. None perhaps but those who have lived in retired parts of the country can know the actual neglect and abandonment which is yet conspicuous with regard to the labouring classes in particular districts, the extent of their ignorance, their want of some superintending and guiding hand, their indifference to improvement, and the difficulties in which they commonly soon become involved. In the mode in which partial relief is afforded to them, and in the immeasurable distance at which they are placed, not only from the higher classes, but from every other class, and in the infrequency with which they enjoy any opportunities of religious or moral instruction, public or private, may be seen so many aggravations of their unhappy condition. If, putting *their* case out of consideration, we turn to the population of large towns, we find the poor who leave the schools not so wholly without the means of further improvement, but surrounded with tenfold temptations.) A very large proportion of the children of the London charity schools become the domestic servants of the rich and great, whose mode of life is particularly unfavourable to the preservation of regular habits in their household dependents. If human ingenuity had been employed to devise a means of corrupting the youth of either sex, it could not have attained a more compendious method of doing so than by causing them to keep the hours, and observe the regimen, and see the manners, and hear the conversation, to which honesty and innocence are at once introduced in the service of people of fashion. So long as this is supposed to be an unavoidable evil, it will be quite useless and unjust to complain of the idleness, profligacy, improvidence, and ingratitude of those for whose early benefit the heads of families have subscribed an annual guinea to a charity school.

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## REVIEWS.

### THEORY OF MECHANICS.

*The Elements of the Theory of Mechanics*, by the Rev. R. Walker, M.A. of Wadham College, Oxford, D.B. Talboys, 1830.

We are glad to announce the appearance of an analytical work on mechanics from Oxford, which has hitherto too much neglected the important branch of mathematics just alluded to. This production shows, that if that university still continues to undervalue the modern methods, it is not for want of one man at least who understands them thoroughly, and can exhibit them in a clear, simple, and elegant form. A few more equally successful undertakings, and Oxford will not any longer borrow elementary treatises from Cambridge.

Before entering upon the consideration of this work, we will just notice the beautiful manner in which it is printed and got up. Of all the mathematical treatises which have been published in England for the last twenty years, none, in our opinion, can compare with it in this respect. This is due to the *double leads* between the lines, and the manner in which the mathematical expressions are thrown out, so as not to be lost among the letter-press. The table of contents is excellent, and forms a perfect syllabus to the work.

This treatise is upon the model of the first volume of Venturol's mechanics, known in England by the translation of Mr. Creswell. As a whole, we prefer the work now before us, on account of its avoiding the mixture of methods, which sometimes deforms that of Venturol. That we consider this no small praise, will appear when we say, that we considered, and do still consider, the Italian work as of the highest utility to those students, who have been well grounded in the differential and integral calculus. We proceed to a detailed examination of the body of this work, dwelling most on those points on which our opinion differs from that of Mr. Walker.

In the chapter of definitions, force or power is defined to be 'the cause which produces or tends to produce motion or change of motion,' and the parallelogram of forces is established after the method of Newton. In an appendix are given the rigorous demonstrations of Laplace, Poisson, and Pontécoulant. The old objection, that Newton's demonstration is not united to the statical problem, we perfectly coincide in, but why, when giving a better one in an appendix did not the author supply a better and more statical way of measuring

the effects of force. Again, we do not see the necessity of three distinct proofs of this proposition. That of Poisson would have been amply sufficient. The rest of this chapter, on the equilibrium of forces meeting in a point, is altogether unobjectionable. The author then proceeds to the general conditions of equilibrium of any rigid system, which only wants a collection of examples to be perfectly intelligible. This Mr. Walker proposes to supply in a separate work. We can only say, we hope he will keep his word. He says 'This second volume shall contain, deductions from the principles here established, a selection of examples with their solutions, either complete, or partly so, or merely with their results, as may appear necessary, and any historical illustration or remark, which may throw light or interest upon the subject.' Such a work, somewhat similar to Peacock's Examples of the Differential and Integral Calculus, is a desideratum, and we doubt not will be most effectively supplied by Mr. Walker.

In treating of simple machines, the whole effects of friction are omitted. This is a serious defect. The law of friction, in statics at least, is as well determined as any other, and the results are often remarkable for their analytical beauty. The equilibrium of flexible bodies, also, is not treated with that degree of generality to which it is entitled. We find only the common funicular polygon and catenary, well treated certainly, but no mention is made of the general equations of equilibrium, either in flexible or elastic substances. Venturi would have been an excellent guide. The principle of virtual velocities, that singular generalization of all the problems, both of statics and dynamics, is altogether omitted, which, considering the part that principle must play, in the future studies of every one who reads this work, is not to be defended. The demonstration given by Lagrange, at the commencement of the *Mécanique Analytique*, sufficiently developed to be intelligible to the beginner, might be introduced with great advantage, since it makes this important principle almost self-evident to the eye.

We now proceed to the part of the work which is devoted to dynamics. Here, as before, there are no faults to be found except those of omission. First, we will notice, the general equations of motion of a point round a centre, in which the author proceeds no further than the supposition of a force, directed only to the centre. The time is past when the studies of those who read such a work as this, are confined to the planetary theory on the elliptic hypothesis only. The perturbations of the system begin to be taken into account,

and, since the publication of Professor Airy's excellent mathematical tracts, are more attainable than they used to be. Such equations, therefore, should be introduced into elementary works on dynamics, as will lead the pupil close up to the confines of the higher astronomy, and there leave him, in possession of as much mathematical knowledge as will enable him to recognise as old acquaintances all the preliminary steps. The general equations of the motion of a point, acted on by *any* forces, to polar co-ordinates, should therefore be introduced, either as given in Professor Airy's work or even in the form in which they are exhibited by Laplace. The same may be said, of the equations belonging to the rotation of a body round a variable axis, and the attraction of spheroids.

D'Alembert's principle, with all its important consequences, are clearly deduced, and great simplicity and symmetry reign throughout the investigations; but as they are necessarily extremely like those given in other works, we have nothing to say in reference to this particular one, except to praise the selection and general execution. But when we come to the second part of the dynamics, which treats of the laws of the motion of matter, we find no investigation of the effect of the resistance of the air on projectiles, or on the pendulum. On this latter subject results sufficiently practical have been given by Professor Airy, in the Cambridge Philosophical Transactions, in so simple a form, that no fear of frightening the reader with long series can induce an elementary writer to neglect them. The application of D'Alembert's principle to the motion of machines is omitted, as is also the principle of least action, both of which it might be desirable to introduce.

There is one remark which we have to make upon the general execution of this work. Without the promised examples, or the assistance of a good tutor, it is rather a manual for the proficient, than a text-book for the beginner. We do not say it would not be of the highest use to the latter, but not unless accompanied either by another work, or an able teacher. Taking this view of it, we sometimes find propositions purely mathematical given at length, while the demonstrations of others, of more difficulty, are omitted. It is certainly advisable, in a work of this description, not to load the work with mathematical investigations, which may be found by reference to any work on the differential calculus but if any proposition of a certain degree of difficulty is omitted as known, all which are more easy and more common should be omitted likewise. This is not always the case in the present work. For example, the integration of the

equations  $\frac{d^2 x}{dt^2} = 0 \frac{d^2 y}{dt^2} = 0 \frac{d^2 z}{dt^2} = 0$  is given (p. 71), while the student is referred (and very properly) to other books for much more difficult matter, such as the expression for the radius of curvature of any curve, and difficult and complicated integrations.

With the exception of this, and some other very small defects, and the omissions to which we have alluded, we can say nothing of this treatise but what is good. It is at present an excellent manual; when the collection of examples appears, it will be a most useful work for the beginner. On the execution of the second part much will depend; but the author has shown himself too well acquainted with the subject, to allow us to believe that there will be any falling off. Coming from Oxford, this treatise will be peculiarly acceptable, to all who wish for the advancement of science in England. Without the least disposition to sneer at the state of mathematical knowledge in that university, as is done by some, who, generally speaking, know but little of the position of affairs there, we assert a fact, admitted generally enough in Oxford itself, that their course of scientific studies, till very lately, did not differ materially from what it was, in the half century which followed the death of Newton. On the necessity of the reformation which has already begun, all who understand the subject are of one mind, and we hope and believe the day is arrived, when the repugnance to innovate, which distinguishes the University of Oxford, is so far modified by a conviction of the necessity of advancing with the age, as to guarantee the continuance of all that is good, without at the same time giving a handle to its enemies, by the exclusion of admitted improvements.

#### LEMPRIERE'S DICTIONARY.

1. *A Classical Dictionary; containing a copious Account of all the Proper Names mentioned in Ancient Authors, &c. &c., by J. Lempriere, D.D. The Fifteenth Edition, corrected.* London: Cadell, 1829.
2. *A Classical Dictionary, &c., by J. Lempriere, D.D. Fifth American Edition, corrected and improved by Charles Anthon, Adjunct Professor, Columbia College, New York. 1825.*
3. *Bibliotheca Classica, &c., by J. Lempriere, D.D. The*

*Third Edition, greatly enlarged, 1797. Re-edited by E. H. Barker, Esq., of Thetford, Norfolk, with the improvements of C. Anthon, Esq., &c.; to which is subjoined by the present Editor an Appendix.* London, 1828.

4. *A Classical Dictionary, &c., by J. Lempriere, D.D. Edited by the Rev. F. D. Lempriere, M.A. 4to. 1829.*

It is the practice of our brother Reviewers to confine their labours almost entirely to recent publications. We acknowledge no such restriction. Our object is not to amuse by novelty, but to promote the grand object of education. In this point of view the date of a publication is a matter of indifference. In selecting any work for criticism we ask but two questions, or at the most, three: Has the work merit? has it an extensive circulation? or is it sanctioned by places or persons possessing authority? If an affirmative answer be given to the first question, the second is unnecessary. We must review and recommend. If on the other hand, a work having no merit has notwithstanding obtained considerable reputation (not a very rare case), we still review it. That which has neither merit nor circulation is left to its obscurity. Our third inquiry comprehends books used in our great public schools and in colleges; such books are often limited nearly altogether to particular places, but still they demand examination, as forming a part of our system of public instruction. Acting upon these principles, it is our duty to devote considerable attention to a book like Lempriere's, that has for so many years been in the hands of every schoolboy.

Dr. Lempriere's *Bibliotheca Classica* was first published in the year 1788, as appears from his preface dated from Pembroke College, Oxford. Its title was well calculated to invite attention. The young and old, the pupil and the master would be eager to possess a book, which promised to give 'a copious account of all the proper names mentioned in ancient authors.' A prudent man would indeed have asked, whether a single individual, not much above twenty years of age, was equal to a task so Herculean. Accurate knowledge in any part of any separate subject is a rare acquisition; but that any one should possess an intimate acquaintance with all the details of history, geography, and mythology, from the age of Homer to that of Constantine, from Cadiz to the Ganges, or even know where to find such knowledge, was a point on which scepticism was admissible. To have failed in such a task was no disgrace; but it would be difficult to excuse the temerity of the undertaking.

In the following examination, we shall commence with the first of the four works in our list; and, for the sake of dis-

tinctness, we shall take in succession the three departments, geography, history, mythology.

To begin with the most prominent feature in the map of Europe, we first turn to the word *Alpes*. In reading the varied history of Italy, it is important to be acquainted with its great northern barrier, and especially those passes which opened to the barbarians the fertile plains of the Po, and at a later period enabled the Romans in return to pour their legions upon Gallia. But no information of this nature is to be found in the article before us. We could not collect from it the fact of there being a single pass, but for the idle account of Hannibal's making his way through the rocks, by softening and breaking them with vinegar. The Alps themselves are described as mountains that separate Italy from *Spain*, Gaul, &c.; and a little below we are told that they are distinguished according to their situation by the different names of *Cottiae*, *Carnicæ*, *Graiae*, *Noricæ*, *Juliae*, *Maritimæ*, *Pannoniae*, *Penninæ*, *Poenæ*, *Rhaetiæ*, *Tridentinæ*, *Venetæ*. Hard names enough certainly. But what knowledge is to be extracted from them, when all geographical order is forgotten in their arrangement, and the maritime Alps seem almost purposely placed in the centre of the list? Our hope was that, as the present article omits all further description of these different parts of the Alps, we should have found the wished-for information under the several names. In this hope we first searched for the Cottian Alps; and were fortunate enough to find two accounts, viz., under the head *Cottiae Alpes*, 'a certain part of the Alps by which Italy is separated from Gaul'; and under *Coctiae* (b),\* 'certain parts of the Alps, called after Coctius, the conqueror of the Gauls, who was in alliance with Augustus.' The precision of the two articles is beyond all admiration; but observe at the same time the valuable piece of information thrown in incidentally: 'Coc-tius, the conqueror of the Gauls.' Had the article *Cottius* not been forgotten, we should have perhaps found under it an account of this conquest. It is somewhat extraordinary that after depriving Rome of her most important province, he should still have retained his alliance with Augustus. If the reader wishes for further information on the Alps, he will find that the *Peninæ Alpes* are 'a certain part of the Alps' —that 'Cremonis (b) jugum is a certain part of the Alps.' But enough of the Alps. The geographical description of the Pyrenees is completed in three lines and a half. The rest of the article is devoted to the origin of the name (a, b). This was derived, we are told, either from a young lady named

\* (a, b.) The reason for which these letters have been attached to the word *Coctius* and others will appear afterwards.

**Pyrene,** who, being ravished by Hercules, brought into the world a serpent, which so terrified her, that she ran into the woods ; or from a fire (*πῦρ*) which once raged there, and caused the silver mines to run down in large rivulets. This account, it is candidly observed, is deemed fabulous by Strabo.

Descending from the mountains, we will next take Gallia. Under this head we find, among other remarks, the following passage :—‘ Aquitania Gallia, now called the provinces of *Poitou, Santonge, Guienne, Berry, Perigord, Quercy, Limosin, Gascogny, Auvergne, &c.*, was situate between the Garumna, the Pyrenean mountains and the ocean.’ Now a boy in the lowest form of a school with his Cæsar in his hand would have known that seven of the nine provinces enumerated, viz., the Pictones, Santones, Bituriges-Cubi, Petrocorii, Cadurci, Lemovices, Arverni, were situated, not between the Garumna and Pyrenees, but between that river and the Ligeris. The cause of the error is clear. There has been a confusion between Aquitania as defined by Cæsar, and the same province as extended to the Loire by Augustus. From the same article the following is extracted :—‘ Gallia (a, b) Transalpina, or ulterior, which refers to that part of Italy which was conquered by some of the Gauls.’ It is true that five lines further on, a more correct definition is given ; but such contradictions are common throughout the book. Thus we find a separate article, ‘ Cispadana Gallia, a part of ancient Gaul, south of the Po ;’ and to complete the confusion, ‘ Cisalpina Gallia, a part of Gaul, called also Citerior and Togata. Its farthest boundary was near the Rubicon, and it touched the Alps on the Italian side.’

Before leaving Gallia, let us point out a few errors of a slighter, but not very trifling nature. ‘ Petrocorii, the inhabitants of the modern town of *Perigord* in France’ (a, b). When Chester and Cheshire become synonymous, we will not complain of any confusion between the province of Perigord and the town Perigueux. So again : ‘ Andes, a nation among the Celtæ, whose chief town is now *Anjou*.’ Similar errors will be found under Lemovices (a, b), Caturiges (a b), Helvii. Again : ‘ Albici, a people of Gallia Aquitania (b). Cæs. B. C. l. 34.’ A reference to the passage quoted will prove these mountaineers to have dwelt above Marseille, and consequently at no inconsiderable distance from Aquitania. ‘ Armoricæ, cities of ancient Gaul, &c.’ Is it necessary to observe that Armoricæ is not the proper name of any town or towns, but merely an adjective derived from *ar* and *mor*, *near the sea*, both of which terms, by the bye, are common to the Latin with the Celtic ? The different mineral

waters in Gaul were of considerable note, but Aquæ Tarbellicæ, Aquæ calentes, two separate places called Aquæ Bormonis from the Gallic God Bormo, and from one of which the Bourbon family take their title, Aquæ Helveticæ, Aquæ Neris, &c., to say nothing of similar places in other countries, as our own Bath, Aquæ Solis, are all alike omitted (a,b). There is no article Aquæ of any kind. ‘Seduni, an ancient nation of Belgic Gaul. Cæs. B. G. 3.’ Now Cæsar himself, in the very passage referred to, fixes the Seduni on the Lake of Geneva and the Rhone, extending up to the summit of the Alps. Indeed their capital town is now Sion in the Valais. Most certainly the limits of Belgic Gaul never extended thus far.

We have dwelt somewhat long upon Gaul, because this is the country which the schoolboy first examines in reading Cæsar. It is also the country of all others, where accuracy is most easily attained; so that if we find the geographer fail here, we need scarcely examine any farther. But the dictionary of Lempriere has taken such firm root in our schools, that we despair of eradicating it, except by repeated efforts. Germany may be next examined. That part of the article Germania which is geographical, contains precisely ten words: ‘An extensive country of Europe at the east of Gaul’ (a, b.) That Augustus constituted two provinces Germania superior and Germania inferior on the western side of the Rhine, a fact most necessary to be known in reading Tacitus and the historians under the empire, is at the same time a fact not to be deduced from any part of Lempriere we have hit upon (a, b).

We will next take Italia; for we wish, by selecting the most conspicuous names, to convince the reader that there has been no unfair packing of evidence. It is not a great novelty to state that Italia, in Herodotus and the earlier Greek writers, includes only a small part of the whole peninsula at the southern extremity. It is a fact equally notorious, that Ausonia was a very limited region near the Liris, Aurunca, the epithet of the town Suessa, being nothing more than an equivalent form for Ausonica. But of such limitations not one word in the dictionary. On the contrary: ‘Italy bore at different times the names of Saturnia, Cænotria, Hesperia, Ausonia, and Tyrrhenia.’ More complete confusion could scarcely have been comprised in five words. The ancients, among their many etymological fancies, were too much in the habit of referring the name of every country to some king, prince, or princess. Such etymologies our author most religiously reports. Thus Thessalia, Pelasgia, Ætolia, Italia, Ausonia, &c., severally received their names from Thessalus

(a, b), Pelasgus, Ætolus (a, b), Italus, Auson, &c. The list might be carried through some hundreds ; or we might more correctly say, that such trash constitutes the main part of the geographical department. But as if it were not enough to report the idle fancies of the ancients, in the article Ausonia, Virgil is seriously charged with an anachronism in applying Ausonia as a name for Italy in the age of Æneas, because, forsooth, young Auson the son of Ulysses was not then born (a, b). Under Hetruria we were rash enough to expect some remarks on the great extent of the Etrurian states in the ages before Rome became the dominant power. We expected to find some mention at least of those federated Etrurian states that were settled in the plains of Lombardy prior to the inroads of the Gauls ; but we were disappointed. When the schoolboy finds Virgil applying the name Tuscan to his native Mantua, he must be left to charge the poet as before with an ignorance of geography equal to his ignorance of chronology. Or perhaps he will begin to suspect the dictionary rather than the poet, when he finds in the former such an article as : ' Mediolanum, now Milan, the capital of Insubria, *at the mouth of the Po.*' But we must not forget Rome. Of the immortal city the geographical and topographical description under the article Roma occupies about five lines (a, b). We must therefore turn to other parts of the book for information. The most important place to us in Rome is undoubtedly the great Forum. This was the scene of the public orations. The orator had around him the Capitol, the Tarpeian rock, the temple of Jupiter Stator, the different buildings on the Palatine, the Senate, the Comitium, &c. To understand then fully the orations of Cicero, we ought to have some knowledge of the magnificent spot where they were delivered. Yet although there are sixteen articles under the title Forum, the great Forum itself is altogether omitted. The Forum Augusti is thus described : 'a place at Rome' (a, b). The Forum Boarium so often mentioned by Livy is wholly forgotten (a, b). 'Transtiberina is a part of Rome on *one side* of the river' (a, b). So we might have inferred. The 'Tuscus Vicus is *a village near* Rome' (a, b). But it may be said that complete topographical accuracy is scarcely to be obtained by any study ; and, when obtained, requires too much space for a general work like that we have before us. There is, however, no reason why a brief statement of the main outlines of the great city should be omitted. This moreover requires no deep investigations, nor any great space. Take for instance from Livy, 27, 37, the route of a religious procession, which of course would pass through some of the principal streets : 'A porta (Carmentali)

Jugario vico in forum venere . . . inde vico Tusco Velabro-que per Boarium Forum in clivum Publicium atque ædem Junonis Reginæ perrectum.'

But we have seen enough of Italy. Let us now cross the Adriatic. Our geographical guide would, perhaps, wish us to sail from 'Locri, a town of Magna Graecia, not far from Rhegium on the Adriatic.' But we prefer crossing from Brundisium to Dyrrhachium or Apollonia. We intended to have landed in Illyria; but our guide again informs us that Apollonia and Dyrrhachium (a, b) are towns of *Macedonia* on the Adriatic; and for fear of any doubt, the assertion is repeated, as regards Dyrrhachium, under the title Epidamnus (a, b); for be it observed that, in this dictionary, it is the practice, when a town has had two names, to give the same information twice over. See Padua, Patavium; Therme, Thessalonica (a, b). We must, however, correct our observation, for the information is not always the same. Thus, in the present instance, under the Roman name Dyrrhachium, we have an account of the Greek colony sent from Corcyra; under the Greek name Epidamnus, a colony from Rome is mentioned. This distribution of the information is peculiarly happy. But to return: from these two towns ran the Great Via Egnatia a course of more than five hundred miles through Pella to Thessalonica, and thence to Byzantium. This road may be considered as the main artery of the Roman Empire; forming, together with the Via Appia, a communication between the capital and all the eastern provinces. But notwithstanding its importance, not a trace of it is to be found in Lempriere (a, b).\* It may perhaps be imagined that it is not part of his plan to give the roads. To this it might be answered, that he ought to give them. But in fact it is part of his plan. Thus we find the same Flaminian road twice over, *viz.* under Flaminia Via, and then again under Via Flaminia (a, b). Under the last title, by the bye, the Via Flaminia is said to pass through the country of the Osci (*i. e.* Campania) and of the Etruscans (a, b). What should we think of a person, who said, that the York mail passed through Sussex? The errors throughout this book are so ludicrous, and meet one so constantly at every turn, that it is difficult to resist the temptation of digressing. We must return however to Greece; and commencing with Megāra, we are informed, that 'Megāra † is a city of *Achaia*, the

\* This road crosses the great Candavian mountains, of which Dr. Lempriere gives the following Irish description: 'A mountain of Epirus which separates Illyria from Macedonia.'

† The error in the quantity of Megara is not accidental. Megaris is also

capital of a country called Megaris, &c.' (a, b). For this extraordinary error it is not at first easy to account. But let us see the article Achaia. 'Achaia, called also Hellas (b), a country of Peloponnesus at the North of Elis, &c.' Called also Hellas, say you? Well, turn to Hellas. 'Hellas, an ancient name of Thessaly, more generally applied to the territories of Acarnania, Attica, Ætolia, Doris, Locris, Boeotia, and Phocis, and also to all Greece. It received this name from Deucalion, and now forms a part of Livadia.' Of all the confusion we have hitherto observed in this remarkable work, nothing approaches the accumulation of error upon error in these passages. They together constitute a complete labyrinth of contradictions, arising also from an ignorance of two of the most familiar facts in Grecian history. Hellas in Homer's time was only applied to a part of Thessaly. Soon after it became the common appellation of the Greek nation, including their most distant colonies, and being in fact as vague a term as Christendom \* in our times. Similarly the term Achaia for a long period was applicable only to the strip of land that lay along the southern coast of the Corinthian gulf bordering on Elis, Arcadia, and Sicyonia; but, as a Roman province it included all Greece south of Macedonia. Now forget these distinctions, cross the several meanings in every possible combination, and you may arrive at something like what we have extracted from the dictionary. After this it is scarcely worth noticing that our geographer transplants the Locri Epizephyrii from Italy to the Corinthian gulf, confounding them with the Locri Ozolæ. The geographical matter connected with Athens amounts to this: Athens, a celebrated city of Attica. But we must hasten on our circuit of the ancient world. In the Ægean sea one of the first islands we meet with is Ceos. As a preliminary we shall quote from Lempriere the six articles following:

- ‘ 1. Cea and Ceos, an island near Eubœa, called also Co (a, b).
2. Ceos and Cea, an island, *vide* Co.
3. Cœa, an island of the Ægean sea, among the Cyclades, called also Ceos and Cea, from Ceus the son of Titan.—Ov. Virg. (b).
4. Coos, Cos, Cea, and Co, an island of the Ægean sea, *vide* Co.
5. Cos, an island, *vide* Co.
6. Co, Coos, and Cos, now Zia, one of the Cyclades, situate near the coasts of Asia Minor, &c. . . The women of the island always dressed in white; and their garments were so clear that their bodies could be seen through, according to Ovid. . . The women of Cos were changed into cows by Venus,’ &c.

marked long. So we find Tegœa (a, b), Tegœa (a, b), Nemœa (a, b), Amœnus (b), Taygetus (b), Taygète (b), Taygëta (bis) (b), Macédo (b), Ma-  
trona, (a, b), Philotimus, &c.

\* See Herodotus, II. 182; VII. 157.

The latter part requires no comment ; and the reader of course knows that Ceos, now Zia, one of the largest of the Cyclades near Eubœa, is not exactly the same island as Cos, now Stanco, one of the Sporades on the coast of Asia Minor. The forms Cea, Cœa, and Co, we never met with except in Lempriere ; and Coos is the adjective form from Cos.

But the islands in the Ægean are particularly remarkable for the various appellations given them. They boast of a number of aliases that the cells of Newgate might envy. ‘ Andros, an island in the Ægean sea, known by the different names of Epagrys, Antandros, Lasia, Cauros, Hydrussa, Nonagria (a, b).’ ‘ The island of Rhodes has been known by the several names of Ophiusa, Stadia, Telchinis, Corymbia, Trinacria, Æthreia, Asteria, Poessa, Atabyria, Oloessa, Marcia and Pelagia ’ (a, b). The particular period, at which each of these twelve names prevailed, is not specified ; but certainly for the last five and twenty centuries the name of Rhodes has maintained its ground. See also Eubœa, Samos (a, b), Delos (a, b), &c. As fifty lines of close print are devoted to the last-named island, we expected to find some notice of what is certainly the most interesting fact connected with this little rock, viz. that, from the destruction of Corinth down to the Mithridatic war, Delos was the chief entrepôt of commerce between Europe and Asia. But our author had weightier matters to communicate. He concludes his article thus : ‘ The people of Delos are described by Cicero, Acad. 2, c. 16 and 18, l. 4, c. 18 (observe, he would not venture to assert it without three authorities), as famous for rearing hens.’

Asia is the next field for our investigations. It is well known that this word belonged originally to a very small part of the immense regions now included under the term. Herodotus indeed uses it in the most extended sense ; but with the Romans, the word Asia, in nine cases out of ten, means no more than the kingdom of Pergamus left them by Attalus. The term Asia Minor, which is the invention of modern geographers, has been duly defined by our author, but the other limitations of the word are wholly neglected. Now suppose a boy is reading the Manilian oration, and comes to the following passage, c. 3—‘ Et ita regnat (Mithridates) ut se non Ponto neque Cappadociæ latebris occultare velit, sed in Asiæ luce versari ;’ or c. 5, ‘ Imminent duo reges toti Asiæ ;’ or again c. 22, ‘ Difficile est in Asia, Cappadocia, Syria, &c.’ As illustrated by Lempriere, these three passages, and hundreds of others, become altogether nonsense (a, b).

The following is the whole article on Galatia:—

‘A country of Asia Minor between Phrygia, the *Euxine*, Cappadocia, and Bithynia. It received its name from the Gauls who migrated there *under Brennus some time after the sacking of Rome*.’ We were not aware before that the Galatians at any point touched upon the *Euxine*: we thought they were an inland people; and we are somewhat inclined to suspect that our author fell in somewhere with the word ‘Pontus,’ which he translated the *Euxine*, instead of the kingdom so called. But a still more grievous error remains. If we compare the present article with what is written under the title *Tectosages*, it will appear that the author has confounded two persons no way connected except in name. The attack on Rome by Brennus took place about b. c. 390. Now the Gauls passed over into Asia about the year b. c. 278. But our Dictionary is as usual at variance with itself. Under the word *Brennus*, the two chiefs and the two dates are properly distinguished. It is also correctly stated there, that even the second Brennus died directly after the attack on Delphi, and consequently before the expedition into Asia.

We next turned to Ancyra, to see what account would be given of this celebrated town, and its still more celebrated inscriptions, commonly called the *Monumentum Ancyranum*. The whole article stands thus: ‘*Ancyræ, a town of Phrygia, Paus. i.*’ We find the usual confusion under *v. Cappadocia*. It is defined to be

‘a country of Asia Minor between the Halys, the Euphrates, and the *Euxine*. When they (the inhabitants) were offered their freedom and independence by the Romans, they refused it, and begged of them a king, and they received Ariobarzanes. It can boast of the birth of the geographer Strabo, &c. . . The kings of Cappadocia mostly bore the name of Ariarathes.’

The limits of Cappadocia here given are nearly, yet not quite, suited to the geography of Herodotus, but entirely inconsistent with the description of later writers. The following short quotation we take from Strabo, 12. 4:—

‘Cappadocia (in the larger sense) was divided by the Persians into two satrapies, and so passed into the hands of the Macedonians. Under these, however, the two satrapies became kingdoms; one of which they called Cappadocia Proper, or Cappadocia near the Taurus, or lastly Great Cappadocia. The other they called Pontus, or Cappadocia on the *Euxine*.’

Now let us read once more the article of Lempriere. He commences with a definition which can only be applicable to the Herodotean Cappadocia. The story of Ariobarzanes belongs to the Cappadocia in the confined sense of later times.

Then he jumps back to the original extent when he claims for Cappadocia, Strabo, a native of Amasia in Pontus (a, b); and the concluding remark on the name Ariarathes brings us a second time to the more limited region. If by the side of such errors we were to place so trifling a matter as the mere omission of the city Amisus, we could not expect to catch the attention of our reader. The petty omission of a capital city would be lost sight of, just as the island of Lemnos, according to our author, is overshadowed by mount Athos.

We refrain from crossing the Euphrates into the difficult regions of eastern geography. If our author fails where all is clear and known, can we expect accuracy where deep and original investigations are required. Indeed we have already entered so fully into the geographical matter of this dictionary that we have room for little more on this head. Suffice it to state generally that what relates to Ægypt and Æthiopia, to Africa, Numidia, and Mauretania, &c., is fully worthy of all we have yet seen.\*

Here then let us pause, and ask every schoolmaster in the United Kingdom, what knowledge of geography is to be obtained from Lempriere's classical dictionary? How many will subscribe to Dr. Butler's remark in the introduction to his Geography?

'To the learned author of the Classical Dictionary, the rising generation and their instructors owe so great obligations, that I can only say, I wish this little book of mine may be but one-tenth as much and as deservedly esteemed.'

In the arrangement which we adopted at the commencement of the present article, History formed the second division of our inquiry. History, however, divides itself into two branches, the history of countries and the history of individuals; or rather it is the same subject considered from two different points of view, and therefore disposed and arranged in different ways. The historian in the former sense traces the successes or misfortunes of some state, bringing forward different individuals, and again throwing them from our notice, just as they take a prominent part in the political movements of the day or again give way to others. It is a vice then inherent to history that we catch only unconnected views of an individual's life. He appears and disappears so

\* The following may be taken as a sample:—

'Amilos or Amzius, a river of Mauritania, where the elephants go to wash themselves by moonshine' (a, b).

In the article Æthiopia no distinction is made between the curly-headed Æthiopians and those with straight hair, who are accurately distinguished by Herodotus; to whom, moreover, no reference is given under this head (a, b).

rapidly that we are often at a loss to determine his identity. It is here that we require the aid of the biographer. With him the individual is the main subject ; and he presents us with perhaps a meagre but at any rate a connected account. There are some characters indeed, such as Alcibiades, Pericles, Pompey, and Cæsar, whose history is the history of their country during the time they lived. Thus a biographical dictionary is supplementary to the regular histories ; and we may presume that every one who possesses the classical dictionary is at the same time provided with some continuous works on Grecian and Roman history. It is only where the latter fail him that he should have recourse to the former. Under this impression we shall select for examination, not the very foremost personages of history, but those who occupied a secondary, yet important rank. Nor indeed would the former enable us to form a fair estimate of the classical dictionary. It is almost impossible, for instance, to misstate the leading events in Cæsar's life, and none but the leading events can appear in such rapid outlines as the present work can admit. Yet even in these lives our author has contrived to cast an air of ridicule and suspicion over what is undoubted by throwing in a large proportion of childish anecdotes scraped together by Suetonius, Plutarch, Valerius Maximus, and other writers of that stamp. The very references to the authors at the end of each life enable a judicious reader to judge of their value. Thus at the end of the article 'Cæsar' we find the name of but a single contemporary writer, *viz.* Diodorus ; and it is somewhat unfortunate that the part of his work which related to Cæsar's times no longer exists(a, b). But, as we said above, to form a true estimate of the work, we will select not such men as Cæsar, Pompey, Cato, Cicero, but those who hold a rank in political importance immediately next to these ; and instead of picking up straggling errors we will at first confine ourselves to the single period when the above-mentioned persons lived. It will be found that almost every life is a tissue of nonsense. To begin with Bibulus, the following is the whole information furnished : 'A son of M. Calpurnius Bibulus by Portia, Cato's daughter. He was Cæsar's colleague in the consulship, but of no consequence in the state according to the distich mentioned by Sueton. in Jul. c. 20. "Non Bibulo," &c.—One of the friends of Horace bore that name, 1 Sat. 10, 86.' (a, b). Now Cato died b. c. 46, in the fifty-ninth year of his age ; Cæsar and Bibulus were consuls b. c. 59. Hence it follows that Cato at the age of forty-six saw his grandson consul of Rome. We leave others to calculate

the age of the boy himself when thus appointed governor of the Roman world. But to be serious, the reader of course knows that Portia was the wife, not the mother of Bibulus. But even this error is trifling compared with that in the character given of Bibulus. With the exception of his father-in-law he was perhaps the most influential and certainly the most unflinching advocate of the oligarchic faction, never wavering in their support even though opposed by Pompey himself. Accordingly we find his name mixed up with all the proceedings of those most eventful times, till at last commanding Pompey's fleet in the Adriatic he fell a sacrifice to his excessive exertions. But our author as usual drew his information from an idle anecdote in Suetonius; he forgot the contemporary writers Cæsar and Cicero. As to Horace's friend named Bibulus, if it was worth while to notice him at all, it might have been observed that young Bibulus as well as Messala mentioned in the same passage were most probably old college friends of Horace, for we find (*Cic. ad Att.* 12, 32) that two young men of family bearing those very names were about to enter the university of Athens with young Cicero in the year b. c. 45, the very time that Horace must have been there. Appian also (b. c. 4, 38) tells us that Messala and Bibulus attached themselves to Antony after the total failure of the oligarchs under Brutus.

Next turn to Lentulus Spinther: \* 'A senator kindly used by Julius Cæsar' (b). These seven words constitute the whole article. To make up for this deficiency, we have in another part of the dictionary a second article headed Spinther\* in which is given the anecdote reported both by Cæsar and Cicero of the leading men in Pompey's camp contending for the possession of Cæsar's appointments and gardens. The anecdote is very characteristic of the Pompeian party, and we were not sorry to find it; but why give it on the authority of Plutarch? and why omit in both articles to inform us that P. L. Spinther, in his consulship b. c. 57, was chiefly instrumental in effecting the recall of Cicero, that he was afterwards proconsul of Cilicia, and was honoured with a triumph on his return. L. Lentulus Crus, consul b. c. 49, when Cæsar was provoked to enter Italy with his troops, is often confounded by the schoolboy with the preceding. What does Lempriere say of him? 'L. Lentulus, a friend of Pompey, put to death in Africa' (b). Is observation necessary?

Domitius may be taken next: 'A Roman who revolted from Antony to Augustus. He was at the battle of Pharsalia,

\* Both P. Lentulus Spinther and L. Lentulus Crus are altogether omitted by Mr. Anthon.

and forced Pompey to fight by the mere force of his ridicule' (b)\*. As we are addressing our remarks to boys as much as their instructors, we make no apology for stating what must be familiar to the latter. The Domitius, or rather one of the two Domitii, confounded as usual in this article, we mean L. Dom. Ahenobarbus, the brother-in-law of Cato and consul b. c. 54, is not altogether an unimportant personage in the civil wars, to say nothing of his earlier life. He and Lentulus were the first to oppose Cæsar in his invasion of Italy. Betrayed by his own troops into the hands of the conqueror, he receives his liberty, and again raising a little army at his own expense he sustains a siege at Marseille. Escaping thence, we find him with Pompey in Macedonia, still the determined enemy of Cæsar, and finally he falls in the flight after the battle of Pharsalia. He is the subject of twenty-three of Cicero's letters, and a large part of Cæsar's civil wars. But upon all this our dictionary is silent; a ridiculous anecdote from Plutarch supplies the place. Cicero in his *Philippics* makes the death of Domitius one of the charges against Antony. But Lempriere was better informed. According to him, the Domitius, who was consul b. c. 32, and who the following year went over from Antony to Augustus just before the battle of Actium, was the identical Domitius whose death Cæsar and Cicero in their ignorance ascribe to the year b. c. 48.

Appius Claudius Pulcher, the colleague of L. Domitius in the consulship b. c. 54, the rapacious predecessor of Cicero in Cilicia, the rigid and hypocritical censor b. c. 50, by whom Sallust was expelled from the senate, may fairly claim some dozen lines in a biographical dictionary. The letters which Cicero wrote to him constitute a complete book in the miscellaneous correspondence. But not so much as his name is mentioned by Lempriere (a, b). Want of room is no excuse, when we find three articles (a, b.) devoted to the censor who gave name to the Via Appia, one under 'Appius,' a second under 'Claudius,' and a third under 'Appius Claudius;' not that he repeats the same matter under each of these three heads—on the contrary, the three passages have nothing in common, so that a stranger to Roman history would naturally infer that they treated of distinct personages.

On searching for the name Hortensius, we at first thought that it was altogether omitted, owing to a defect in the alphabetical arrangement; but eventually we found three articles all referring, though not so intended, to the same individual. He is first described as 'a celebrated orator,' &c.; then as a

\* Mr. Anthon has struck this article out, but substituted nothing in place of it.

'rich Roman who asked the elder Cato his wife to procreate children, &c., *Plut. in Cat.*; and lastly (a, b) as 'a Roman, the first who introduced the eating of peacocks at Rome. This was at the feast he gave when he was created Augur.' The singular anecdote about Cato's wife was perhaps worth three or four lines, as it marks a state of public opinion so widely differing from what now prevails. But such a lover of anecdote is our biographer, that the same story appears again under Cato, and again under Marcia; embellished, however, with some slight variations not very consistent with chronology. Cato the Censor (born n. c. 234) is said to have married Marcia, the daughter of Philippus (Consul, n. c. 56.) Plutarch adds that the husband was laughed at by Julius Cæsar, for prostituting her to his friend Hortensius. No wonder Lempriere concluded that the Hortensius thus accommodated must be a different person from the orator. The charitable would have hoped that the words *Cato the elder* were a mere slip; but, in the article *v. Marcia*, he is called Cato the Censor (a, b). The valuable peacock anecdote is a mere translation from Pliny; not that we accuse Lempriere of translating it, for had he seen the passage he would have seen his error. Pliny's words are these: 'Pavonem cibi gratia Romæ primus occidit *orator* Hortensius aditiali cœna sacerdotii.'

We will take the three following articles from the same period.

'Vatinius, an intimate friend of Cicero, once distinguished for his enmity to the orator. He hated the people of Rome for their great vices and corruption, whence excessive hatred became proverbial in the words, *Vatinianum odium*.—*Catull. 14. 8.*' (a, b).

'Calenus, a lieutenant of Cæsar's army. After Cæsar's murder, he concealed some that had been proscribed by the triumvirs, and behaved with great honour to them.—*Plut. in Cæs.*' (a, b).

'C. Scribonius, son of Q. Curio, was tribune of the people, and an intimate friend of Cæsar (a). He saved Cæsar's life as he returned from the senate-house, after the debates concerning the punishments which ought to be inflicted on the adherents of Catiline. He killed himself in Africa.—*Flor. 4. 2.*—*Plut. in Pomp. et Cæs. 49.*—*Val. Max. 9. 1.*—*Lucan, 4. 268.*' (b).

We purposely add the authorities at the end of each, because the reader can judge of the value of the articles from them. Here, as everywhere else, all the contemporary authorities (except indeed Catullus) are omitted. Now the three names we have taken occur pretty frequently in the writings of Cicero and Cæsar, to say nothing of Dion Cassius and Appian. Had any of these four authorities been given, the diligent student might have drawn from the best

sources that information which is denied him in the compilations of Lempriere. He might have found that young Curio had some share in the events which led to the despotic power of Cæsar. He might have learned that Vatinius and Calenus were consuls together, B. c. 47, and have discovered the little fact that we still possess one of Cicero's orations against Vatinius; in which oration, moreover, he might have found abundant evidence of Cicero's regard for his 'intimate friend,' some delicate compliments for instance on his impiety, dishonesty, habit of lying, violence to his mother, witchcraft, &c., to say nothing of the remarks on his personal deformity. True, Cicero afterwards, with his habitual dishonesty, defended this same Vatinius; but the motives for undertaking this defence, as stated by Cicero himself (*ad Div. I. 9*), though decisive against the orator's character, certainly afford no evidence of any regard for Vatinius.

It is almost equally ridiculous to call Curio the intimate friend of Cæsar. From the first moment he appeared in public life to the consulship of Lentulus, B. c. 49, he was the furious opponent of Cæsar. In the course of that year he abandoned the party of the senate, and a few months after he killed himself in Africa. This it was to be the intimate friend of Cæsar.

Those who are not yet satisfied, may consult the articles *Aulus\** *Gabinius* (b), *Piso* the father-in-law of Julius Cæsar (a, b), *Domitius Calvinus* (a, b), *Octavius* the father of Augustus (a, b), *Pomponia* (a, b), &c., and they may endeavour to determine the relationship of the Emperor Augustus to his predecessor from the five articles, *Accia*, *Actia*, *Actia* (bis), *Atia*, and *Augustus* (a, b). Hitherto we have passed in review only a particular period of ancient history. That period, however, has been selected first for its importance, and secondly because the history of those times, being given by contemporary writers, presents itself at once to the biographer without difficulty or confusion. But go to any period in the history of any ancient people, be it Greek, Asiatic, or Carthaginian, and there will be found the same abundant harvest of blunders. The articles under the word *Archelaus* afford a fair specimen of the work. The reader would do well to refer to the book itself; but if he has not an opportunity, the following extracts may serve his purpose:—

1. 'Archelaus, a name common to some kings of Cappadocia. One of these was conquered by Sylla for assisting Mithridates (a, b).' In the first place there was only one king of Cappadocia

\* Mr. Anthon, and after him Mr. Barker, call him *Gabinius Autius*.

named Archelaus ; and secondly, the general who assisted, or rather commanded under Mithridates, was not king of Cappadocia, but the great-grandfather of the king.\*

2. ‘A person of that name married Berenice, and made himself king of Egypt, &c.’

This Archelaus was the son of the general ; but this of course is omitted by Lempriere (a, b).

3. ‘A king of Macedonia... he patronized Euripides.’ 4. A king of the Jews surnamed Herod. He married Glaphyre, daughter of Archelaus, king of *Macedonia* (a, b), and widow of his brother Alexander. *Cæsar* (b) banished him for his cruelties to Vienna, where he died.’

This Archelaus was *the son of Herod the Great*. At the death of Herod he became ethnarch of *Judea*. His wife was the daughter, not of Archelaus the king of Macedonia, who had been out of the world nearly four centuries, but of Archelaus, the king of Cappadocia. Lastly, it was *Augustus* who banished him to Vienna. To return to our author :

5. ‘A king of Lacedæmon (a, b).’ 6. ‘A general of Antigonus the younger (a, b).’ 7. A celebrated general of Mithridates against Sylla. Polyæn., 8. 8 (a, b).’ [Observe the authority.] 8. ‘The preceptor of Socrates (a, b).’ 9. A man set over Susa by Alexander (b). 10. A philosopher, who maintained that goats breathed through the ears (b). 11. A son of Electryon and Anaxo (b). Apollod. 2. 12. A Greek poet who wrote epigrams (b). 13. A sculptor of Priene in the age of Claudius (a, b). 14. A writer of Thrace (b).’

One is at a loss whether to admire more the contents of the several articles, or the lucid arrangement of them.

The chronological order observed in this work may be farther illustrated by turning to any (a, b) of the gentile names Cornelius, Claudius, Ælius, Valerius, Æmilius, &c. To take the last of these, the order (a, b) is as follows :—

‘Æmilius.—1. A youth of Sybaris. 2. A tyrant of Sicily. 3. A youth who had a statue in the Capitol. 4. Lepidus, a triumvir with Octavius’ (*i. e.* Octavianus). 5. A poet of the Augustan age. 6. Scaurus flourished b. c. 100. 7. A poet in the age of Tiberius. 8. Sura, a writer on the Roman year. 9. Mamercus, who conquered the Fidenates. 10. Papinianus, in favour with the Emperor Severus. 11. A censor, b. c. 276. 12. Porcina, an elegant orator. 13. A governor of Egypt under Tiberius. 14. Regillus,

\* Mr. Clinton has made the king of Cappadocia grandson of the general against Sulla. The error is of course a mere accident, as the passage of Strabo referred to corrects it. But the correction of this slight error affords us an opportunity of thanking Mr. Clinton for what is perhaps the most valuable work on ancient history and literature that ever appeared in this country.

conquered the general of Antiochus. 15. Scaurus, fought against Jugurtha.'

We say nothing of the many important persons omitted, nothing of the insignificant names inserted. All we wish is to draw attention to the arrangement. But an inconsistent chronology runs through the whole book. Sometimes a date is referred to the birth of Christ, sometimes to the foundation of Rome, &c. Again sometimes the Varronian date for this era, sometimes a different system is adopted. The confusion that arises from these irregularities is endless.

But perhaps the most valuable part of a biographical dictionary is that connected with literature. We have only room for a few abridged specimens :—

' C. Lucilius, a Roman knight, born at *Aurunca*. He lived in the greatest intimacy with Scipio the *first Africanus*, and even attended him in his war against *Numantia*. He died at Naples in the forty-sixth year of his age, b. c. 103.'

Hence the *first Africanus*, who *died* b. c. 185, lived in the greatest intimacy with Lucilius, who was *born* b. c. 149.

' Terentius.—Scipio, the *elder Africanus*, and his friend Lælius, have been suspected, on account of their intimacy, of assisting the poet,' &c. (a, b).

Terence was born b. c. 195, and was therefore ten years of age when the said Scipio died.

' Aristophanes.—He lived in the age of Socrates, Demosthenes, and Euripides, b. c. 434,' &c. (a, b).

As well might it be said that a man lived in the age of Addison and Southey. Euripides was born b. c. 480, and Demosthenes b. c. 382.

' Antoninus.—There is extant a *Greek Itinerary*, which some have attributed to the Emperor Antoninus (a, b).'

Our copy of this work is in the Latin language.

' Memnon, a man who wrote a History of Heraclea in Pontus, in the age of Augustus (b)\*.'

How many words would it have taken to mention that there yet exists a considerable extract from this history, which is of some importance for the history of Mithridates and his predecessors? But our author (a, b) could not have known it, or he would have referred to the *Bibliotheca* of Photius, under the articles Mithridates and Heraclea.

' Ovidius.—His *Fasti* were divided into twelve books, but of these six have perished (a, b).'

Is there any authority for asserting that Ovid ever wrote more than the six which we possess ?

\* Altogether omitted by Mr. Anthon.

‘ L. Annæus Seneca was born about 6 b. c. He was carried into a stove, and suffocated, in the sixty-fifth year of the Christian era, in his *fifty-third* year. . . . The desire of recommending himself and his writings to the world obliged him too often—to sink into obscurity (a, b).’

‘ Pausanias.—Wrote a *History of Greece* in the *Ionic* dialect,’ &c. (a, b).

As much Ionic as Diodorus Siculus.

‘ Varro.—De Lingua Latina, in five books, written in his eightieth year, and dedicated to the orator Cicero. . . . He died b. c. 28, in the eighty-eighth year of his age. . . . In the civil wars he was taken by Cæsar and proscribed, but he escaped,’ &c.

We gather from the above that the treatise De Lingua Latina was written b. c. 36; but at this period Cicero had been dead seven years. What is meant by a person being taken and then proscribed it is difficult to say. In modern times it is not customary to arrest a man and then offer a reward for his apprehension. The truth is, Cæsar never proscribed him at all; as indeed he never proscribed any one. On the contrary, the conqueror, with his usual generosity, gave him his liberty, and soon after employed him in collecting a public library, an office for which the variety of his literary attainments particularly qualified him. It was after the death of Cæsar that he was proscribed by the triumvirs.

It is part of the plan of this work to give a list of the best editions. Of Horace, the only editions recommended are that of Basil, fol. 1580—Baxter’s, edited by Gesner, 1752—that of Glasgow, 12mo. 1744. But of this department, it is enough to say that no edition of any author appears to have been added since the year 1792; and yet there have been thirteen editions of the Dictionary since that period.

The second stage of our journey is now complete, and we have entirely a new country opening before us. The part of the Dictionary upon which the greatest labour has been bestowed, is evidently that devoted to mythology. It is scarcely an exaggeration to say, that every fable in Apollodorus, Ovid, Hyginus, appears at length in these pages. Possibly our author wished to claim for his own work the character he gives to the Bibliotheca of Apollodorus. ‘ It is an abridged history of the gods and of the ancient heroes, of whose actions and genealogy it gives a *true and faithful account* (a, b).’ Certain it is, that at least three parts of the whole book are set apart for mythology, in its most ludicrous form. With what judgment this large portion of the work has been executed, a few specimens will decide. In the article Danaides (which, with that of Danaus, occupies above one hundred lines), we have the fifty names of these damsels, and the fifty names of

their husbands, paired off in regular order, so as to fill twenty lines, which would form an excellent exercise for one of our spelling-books, thus,—‘ Amymone, Enceladus ; Automate, Busiris,’ &c. &c. &c. ; ‘ Celena, Hixbius ; Hyperia, Hippocoristes (a, b).’ In the same diligent spirit there are given, under Nereides, first a catalogue of fifty nymphs. As Homer and Hesiod are unkind enough to disagree in the names, it was necessary to give the variations. Thus we are favoured with fifteen more. This is followed by another batch of sixteen from Apollodorus ; and, finally, the rear is brought up by a corps of stragglers, also sixteen in number. On the whole, the effective force of the whole corps amounts to ninety-seven long-named Nereids (a, b). Yet, after all, the name of one of these nymphs seldom, perhaps, occupies more than an inch. The dignity of a goddess required a greater extent ; and, accordingly, every Nereid, nay every Danaid, has a separate establishment of her own. Thus the book is thickly studded with interesting articles of the following nature :—‘ Hippomedusa, one of the Danaides—Apollod. Dioxippe, one of the Danaides—Apollod. 2, 1. Lysianassa, one of the Nereids—Apollod. 1, 2. Janira, one of the Nereids (b).’ The fifty daughters of Thespis, the Oceanides, the Centaurs—all the ladies who fell victims to the violence or seductive charms of Hercules, Jupiter, Pan, &c. &c. &c., and the equally numerous offspring of those crimes—appear carefully inscribed in these useful pages. But above all we are bound to notice the gross obscenity pervading the mythological articles, and even the other parts of the book. Perhaps the error of the present day may be on the other side ; but it is not a false delicacy to complain of what is found under Cornelius Gallus (b), Panopolis (a, b), Tiresias (a, b), Thespis (a, b), Hercules (a, b), Epona, &c. &c. Mr. Anthon, in the preface to his edition, speaks in very strong terms upon this subject. ‘ There seemed, indeed,’ says he, ‘ to be a strange prurience on the part of the author, and one totally irreconcileable with his sacred profession, to bring forward, upon many occasions, what should have remained covered with the mantle of oblivion,’ &c. The personal attack upon the author we do not agree in, but we cordially join with Mr. A. in the condemnation of the book.

Of course those absurdities which we have traced through the geography and history appear also in this department. As a specimen of logic take the following :

‘ Anubis, an Egyptian deity, represented under the form of a man with the head of a dog, because he clothed himself in a sheep-skin (b).’

It cannot be worth while to enter deeply into the mythology

of Lempriere. We will merely observe that all the received nonsense of this nature seems to be faithfully given. The chronology and geography of the subject is of course wholly neglected. The polytheism of the Homeric age, and that prevailing at Rome in the age of Cicero, are to Lempriere one and the same.

But before we conclude we must supply an omission which we made in the second division of our review, and descend from Olympus to the lower walks of human biography.

'Amphistides, a man so naturally destitute of intellects that he seldom remembered that he had ever had a father. He wished to learn arithmetic, but never could comprehend beyond the number four (a, b).'

The history of the maid-servant Philotis (a, b), the shoemaker Vatinius (a, b), the hairdresser Cinnamus (b), we can only refer to. The ladies of easy virtue occupy as large a share of the work as the Nereids themselves. Thus in the letter C alone, we find Collucia (b), Cluvia (b), Catia (b), Catiena (b), Carfinia (b), Calvia (b), Calvina (b); no doubt there are many more that we have passed over. The history of their lives is soon told :

'Collucia, a lascivious woman, Juv. Cluvia, a noted debauchee, Juv. Catia, an immodest woman, Hor. Catiena, a courtezan, Juv., &c.'

But above all we are indebted to our author for a very accurate account of the killed and wounded in the various battles of the *Aeneid*. When we read of Euryalus bringing to the ground

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'multam sine nomine plebem;  
Fadumque (b), Herbesumque subit, Rhœtumque Abarimque (b);'  
or of Turnus taking his revenge on

'Alcandrumque (b) Haliumque Noemonaque Prytanumque (b)—'  
it is gratifying to find in our dictionary seven out of the above nine carefully and correctly reported as slain by Euryalus or Turnus. The omission of Herbessus and Noemon was no doubt unintentional, as our author professes to give a copious account of all the proper names mentioned in ancient authors.

Proper names, too, our author rightly considered, are not proper to man alone. With a truly philosophic feeling that embraces the whole animal creation, he presents us with the biography of the following members of the canine race : Mera (a, b) (again under Moera), Hylactor (a, b), Hylax (b), Asbolus (b), Peritas, &c. The horses are not quite as nume-

rous : Cyllarus (a,b), Balias (b), Xanthus (b), Rhœbus (a,b), Cycnus (b), &c. And to avoid all suspicion of undue partiality for a particular division of the zoological world, he has added to the list one elephant and one jackass (a, b) ; and what materially increases the interest of the two last articles, the quadrupeds bore the same name. One is disposed to believe, and it would be a point of most interesting archæological research to prove, that the jackass received the appellation of Nico from his big predecessor.

We have now done, we trust for ever, with the original edition of Lempriere's Classical Dictionary. We shall not qualify our condemnation of it ; for it would be utterly impossible to mention any one fact so disgraceful to the character of classical instruction in this country, as that some thirty thousand copies at least of such a work should have been printed and sold.

Public attention was first drawn to the real merits of this dictionary in the fifth American edition, corrected and improved by Charles Anthon, Adjunct Professor of Languages and Ancient Geography in New York. The motives that led him to correct the work are stated by himself in his preface : ' Having had frequent occasion,' says he, ' to refer the young student to the pages of Lempriere, I was often startled by the strange answers which a perusal of the work led him to give to questions that had been proposed, &c.' Accordingly he undertook to send forth to the world a new edition of the dictionary. This corrected edition, however, was disfigured with typographical errors to a degree unknown to the press of this country ; and it may be doubted whether the errors thence arising did not more than compensate for the improvements. In the sixth edition more attention is said to have been given to the correction of the press. The additions that have been made in all exceed four thousand ; and many of these are so extensive, that perhaps an eighth part of the American edition is from the pen of Mr. Anthon. The Professor himself refers, in his second preface, to those articles upon which he has bestowed the most labour. We propose to make a few selections, chiefly from those to which our attention is thus pointed.

The article on the Mediterranean, which, in the original contains twenty-five lines, has received from Mr. Anthon's pen an addition of one hundred and ninety-five others which begin thus :

' According to the learned Buffon, the Mediterranean Sea was originally a lake of small extent, and had received in remote ages a

sudden and prodigious increase at the time when the Black Sea opened a passage for itself through the Bosphorus, and at that period when the sinking of the land which united Europe to Africa, in the part that is now the straits of Gibraltar, permitted the water of the ocean to rush in. It was also his opinion that most of the islands of the Mediterranean made part of the continent, before the great convulsions that have taken place in that quarter, &c.'

At the end of the same article we have the following :

'The Greeks termed the continent of Africa Libya, and the wind which blows from that quarter they designated by the name of Lips. May not the root of both these terms be the older Greek form λίπω to leave, and Libya hence denote the country left by the waves, the ancient bed of an ocean subsequently dried up or removed ? &c.'

Under the head 'Lectonia' we have about seventy more lines connected with a branch of the same theory ; where one of the arguments brought forward is founded upon a resemblance between Lycaonia and Lectonia.

The real secret of all this is, that Mr. Anthon is a German scholar. He is captivated with the transcendental theories of the German school ; and, altogether forgetting the object of the work which he is editing, he opens upon the unfortunate schoolboy a flood of learning which threatens to be as fatal to the lad's intellect, as ever was the disgorged Euxine Ocean to the land of Lectonia. We assure Mr. Anthon that we have a very great respect for the infant science of geology ; nor should we at all object to its introduction into an elementary work on geography, within certain reasonable limits ; but those limits would bear a very small proportion to the demands of Mr. Anthon ; and the geology would not be the geology of the learned Buffon.

With equal want of judgment he has inserted an article of nearly *five hundred lines* on the Pelasgi, in which are given, not one, but three contending theories on this subject, from different German writers. We shall quote two short passages :—

'The Pelasgi evidently were a colony or race of this kind, (priests) ; 'and their very name, Raseni or Tyrseni, especially the two last syllables, seni, connects them in a manner with the Sindi, or people of India, &c.' Again ; 'According to the ingenious hypothesis of Hirt' (*Geschichte der Baukunst bey den Alten*), 'the first species of walls were named Cyclopiian, because the Pelasgi constructed them by means of a caste of miners. When persons employed in mining enter the bowels of the earth, the lamp which they carry with them, to light them on their way, may be regarded as their only eye ; and hence the fable of the single eye of the Cyclops.'

But *v.* Cyclops, we have another equally satisfactory explanation of this fable :

'The God of Olympus, in the act of discharging his bolts, would be pictured to their minds, by a rude though natural image, as closing one of his eyes for the purpose of taking a more effectual aim : hence the fable.'

Mr. A. forgets that he is making the God of Olympus himself a Cyclops.

To Lempriere's article on Hera, 'the name of Juno among the Greeks,' Mr. Anthon attaches this appendix : 'The name is commonly derived from ἀνέ, by metathesis ἡνα. Damm, however, makes it come from the same root as the Greek ἡνωσ hero, namely, from ἀρε, votum, res admiranda.' If the object had been to bring etymology into disrepute, this article seems well calculated for the purpose ; but as we look upon sober etymology as a most powerful aid in philological researches, we are the more called upon to protest against such a misapplication as the present. In the article Melita, ninety lines are employed in a discussion about St. Paul's shipwreck. Under *v.* Hercules, there is an appendix to the original article, which gives, at an expense of one hundred and fifty lines, Dupuis' theory, that the labours of Hercules are allegorical representations of the sun's course through the signs of the zodiac. At the tail of the original article Roma, Mr. A. gives his ideas on the origin of the immortal city, *seven hundred lines* being devoted to that one subject. In short, whenever a theory falls in the Professor's way, it is sure to meet with protection. The articles Hyperborei, one hundred and fifty lines ; Jones, one hundred and twenty ; Græcia, three hundred ; Eleusinia and Eleusis, four hundred ; the Decemviri, two hundred ; Jupiter, four hundred and fifty ; Plato, six hundred, &c., are additional instances of the outrageous prodigality, with which the pages of a schoolboy's classical dictionary are abandoned by our editor to subtle theories, some ludicrous in themselves, and all, if ever so reasonable, still wholly unsuited to a young student.

In our last number a remark was made upon an error, as to the value and figure of the gold Daric, which appears in Dr. Belfour's edition of the *Anabasis*. This error is perhaps to be traced to Mr. Anthon, whose remarks upon this coin, filling sixty lines, contain both the mistakes. He gives indeed M. Gosselin's valuation at 28½ francs, but attaches little importance to it. If the data for determining the value of this coin are its weight and the quality of the gold, no one had better opportunities of deciding the question than M. Gosselin.

At the same time, however, that we point out so much that is worse than useless in the additions made by Anthon, it would be unfair not to state distinctly that a considerable part of the alterations in the geographical department are great improvements upon the original. The larger portion of these changes have been drawn from the geography of Manneret; and though we are not great admirers of this writer, it is certain that he is incomparably more to be depended upon, than the sources, whatever they were, to which Dr. Lempriere had recourse. Mr. Anthon has added much also to the value of his book by constant references to modern books of travels.

But after all that can be said in favour of his edition of the Classical Dictionary, it yet remains true, that more than three-fourths of the book have still the Lempriere taint. We are aware that he has freely thrown aside much of the original lumber to make room for his additional matter, still the great bulk of the book is as it was. To avoid an unnecessary extension of this paper, we have gone a second time over the remarks which we had made above on the original work, and we have attached the initial letter of his name to all those articles, where the error has been retained by Mr. Anthon. If the reader will cast his eye over these, he will find that the Dictionary, with all the alterations of the American editor (and a considerable portion \* of these are sufficiently objectionable), is a work having little to recommend it. Mr. Anthon deserves much credit for his indefatigable perseverance; but his labour has been ill bestowed. The truth is, Lempriere's Dictionary was a book past all correction, so irretrievably, so uniformly worthless, that to mix up with it anything of value was to throw so much away.

Any remarks upon Mr. Barker's edition are now almost superfluous; but in justice to Mr. Anthon it is right to observe, that this is not a mere reprint of the American edition. We stated above that Mr. A. had rejected much useless

\* In the article Ennius, Mr. Anthon inserts the following: [born about A. U. C. 514, b. c. 237, and flourished towards the close of the first Punic war] i. e. and flourished a few years before his birth. The Punic war terminated A. U. C. 513. Compare this with Lempriere's error in the same article.

*Bructéri*, a people of Germany [between the *Arhisia* or *Erus*, and the *Lacus Flevus* or *Zuyder Zee*]. The words in italics should be *Bructéri* (*Βρούκτερι*, Strabo), *Amisia* and *Ems* (b).

Attica ... 'extent from N. W. to S. E. eighty miles, average breadth, forty miles' (b). The area of Attica then would be 3200 square miles, which is about four times the truth.

In the article *Dacia*, Aurelian is given as the successor of Trajan (b).

*Lugdunum*. *Unum* is said to be equivalent to the word hill (b); it should have been *dunum*.

lumber to make room for his alterations ; this lumber has been very carefully, but not very judiciously, re-incorporated by Mr. Barker in conjunction with the American improvements ; thus at the same time extending the bulk and diminishing the value of the work. The letter *b* attached to many of the names referred to in the preceding part of this paper, will enable the reader to compare Mr. Barker's edition with both the others. Where the letter *b* stands without the letter *a* in those remarks which apply to the original edition, it is to be understood that the passage of Lempriere rejected by Anthon has been again restored by the English editor.

But besides this variation from the American dictionary, there appears at the end of Mr. Barker's, an appendix of a very heterogeneous nature. It contains, for example, amid other matter, an extract from R. P. Knight's 'Inquiry into Symbolical Language,' Sir W. Jones's 'Essay on the Arts commonly called Imitative ;' some remarks on Greek and Roman Music from Butler's 'Reminiscences.' The above are in English. The following in Latin : extract from 'Io. Ionsii Holsatii de Scriptoribus Historiæ Philosophiæ libri iv., Jenæ, 1716' ; ditto, from a work entitled, 'De variis dicendi Generibus G. Heineccius, Lipsiæ, 1790' ; ditto, from 'Mosheim de imitatione veterum, Hamburgi, 1760' ; ditto, from 'Falsterus de Græcis veteribus latine doctis,' Amstel. 1731 ; ditto, from 'Veterum Criticorum Σημειώσεις,' Jenæ, 1687, &c. &c. We were going to enter our protest against the appearance of these last articles in a Latin dress ; but on consideration this is a matter of small importance. It is pretty certain that no boy will ever read five lines of this appendix, and it is equally certain that little will be lost by the omission.

We conclude with remarking, that Mr. Barker has accented all the Greek words in the Dictionary.

Our inquiry has been fatiguing to ourselves, and we fear to our readers also ; but we shall be satisfied if we succeed in driving Lempriere's Dictionary from the schools of this country. We sincerely declare our honest opinion of the three editions, when we say, that the original work is the worst book we ever met with ; that Mr. Anthon's, with all its improvements, is bad enough ; and that Mr. Barker's is considerably worse than Mr. Anthon's.

One more last word. We absolutely forgot the new edition just published in 4to., by the Rev. F. D. Lempriere. It is said to contain a notice of the finest ancient statues and busts,

to be dedicated (by permission) to the Bishop of Chester, and to cost 3*l.* 3*s.* The blunders of the original must look very pretty in the luxurious page of a three guinea quarto ; but it is a luxury we must deny ourselves.

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### BELOE'S HERODOTUS.

*Herodotus ; translated by the Rev. William Beloe. Reprinted in 1830, and edited by A. J. Valpy, M.A., with a Portrait (of the Author). And also reprinted by Mr. Jones.*

*Die Geschichten des Herodotos übersetzt von Friedrich Lange. Zweite verbesserte Auflage. Breslau, 1824. 2 vols. 8vo.*

THESE are at present two series of translations of the best Greek and Latin authors in the course of publication, one by Mr. Valpy, the other by Mr. Jones of Finsbury Square. Mr. Valpy's series, besides reprints of some of those English translations which are considered the best, will contain some new translations. It is much to be regretted that in an undertaking of this kind, which is so well calculated to be useful, the projectors did not determine to give new translations at least of *all* the Greek prose writers ; for the old ones, though possessing various degrees of merit, are far below the present state of our knowledge. Translations of classical authors are works of art in which we may constantly improve, and the progress that we are daily making in Greek criticism and in the more exact study of antiquity, ought to be accompanied by a corresponding improvement in our translations. Within the last few years three new versions of Herodotus have appeared, which we only omit noticing at present, because it is not possible to examine well more than one book at a time, and also because Beloe's translation still retains its rank in public opinion. The circumstance of its being now reprinted by two persons at the same time, and commanding a very considerable sale, is an additional reason for examining into its merits.

Any translation of Herodotus, that has any claims to accuracy, when printed in a cheap form, will be a profitable mercantile speculation. In our colleges, and in the higher classes of our schools, such aids are constantly required by the mass of the students ; and though in many places of instruction the use of a translation is classed among things forbidden, it must be reckoned also among things that cannot be prevented. And if we had good translations to put

into the hands of youth, we are most decidedly of opinion that their use ought to be *recommended*, as a means of aiding the student's progress by presenting him with the meaning of the author, and of raising the standard of morality by recommending that to be done openly which is now done in secret. A proper examination into each passage will soon enable a teacher to ascertain if the pupil is master of his lesson. We do not doubt that the publishers of the reprint of Beloe entertain exactly the same opinion that we do on the usefulness of translations to students, as they know very well who will be their customers; but though we approve most sincerely of their endeavours to promote classical knowledge, we think they are mistaken, in this particular instance, in the means which they have employed.

On opening Mr. Valpy's reprint we find the two following authorities quoted in favour of Mr. Beloe's translation.

'It would confer but small honour on Mr. Beloe to say that his translation is very superior to any which has made its appearance in our language. It is written in easy, perspicuous, and occasionally in elegant language.'—*Encyclopædia Metropolitana*.

'A very excellent work, with learned, useful, and amusing notes.'—*Bibliographical Miscellany*.

From these opinions we dissent entirely, and without any reservation, except one. We admit some of the notes, which are not Beloe's own, to be useful; we also allow that Beloe's remarks are occasionally amusing. But no scholar, who is well acquainted with Herodotus, can read one single page of Beloe's translation without discovering many errors, nor without a feeling almost approaching to disgust, at finding the venerable father of history clothed in such a loose, ill-made, and slovenly dress.

The difficulty of giving this translation a fair examination consists not in the want of materials for fault-finding, but in the superabundance: we might begin with the first chapter of the first book and go on to the last of the ninth.

As a specimen of the manner of Mr. Beloe, and of the German translator whose work is noticed at the head of this article, we shall select a part of the story of Gyges and Candaules (Book I., chap. x.), which Herodotus has told with inimitable simplicity and delicacy.

'Gyges had no alternative but compliance. At the time of retiring to rest he accompanied Candaules to his chamber, and the queen soon afterwards appeared. He saw her enter and gradually disrobe herself. She approached the bed; and Gyges endeavoured to retire, but the queen saw and knew him. She instantly conceived her husband to be the cause of her disgrace, and determined

on revenge. She had the presence of mind to restrain the émotions of her wounded delicacy, and to seem entirely ignorant of what had happened; although among all the barbarian nations, and among the Lydians in particular, for a man to be seen naked even is deemed a matter of the greatest turpitude. The queen persevered in the strictest silence; and having instructed some confidential servants for the occasion, she sent in the morning for Gyges. He, not at all suspicious of the event, complied instantly with the message, as he was accustomed to do at other times, and appeared before his mistress. As soon as he came into her presence, she thus addressed him: Gyges, I submit two proposals to your choice; you must either destroy Candaules and take possession of me and the kingdom, or expect immediate death. Your unqualified obedience to your master may prompt you to be once again a spectator of what modesty forbids: the king has been the author of my disgrace; you also, in seeing me naked, have violated decorum; and it is necessary that one of you should die.'

The latter part of this is quite in the tragic vein; and reminds us of the mouthing of bad tragedy by a bad actor.

The following is the German translation of the same passage.

' Da er nun gar nicht ausweichen konnte, war er bereit. Kandaules aber, als er glaubte, es wäre zeit zum schlafengehen, führte den Gyges in das Gemach, und darauf war alsbald die Frau da. Und Gyges sahe sie recht an, da sie herein kam und ihre kleider hinlegte. Und als die Frau ihm die Rücken zuwandte und nach dem bette zuging, schlich er sich hinaus und davon. Und die Frau sah ihm hinaus gehn. Sie merkte aber, das ihr Mann dies angestifte, und schrie nicht auf, denn sie schämte sich, und that auch gar nicht als wenn sie es gemerket; nahm sich aber vor, Rache darum zu nehmen an dem Kandaules. Denn bei den Lydern, und fast bei allen andern Barbaren, schämet selber ein mann, wenn man ihn nacket sieht. Damals also war sie ganz ruhig und liess sich nichts merken. Aber sobald es Tag ward, hielt sie bereit die Diener, die ihr am ergebensten waren, und liess den Gyges rufen. Er dachte, sie wüsste nichts von der Geschichte, und kam sogleich. Denn auch vordem war er gewohnt zu kommen, wenn ihn die Frau rufen liess. Und als Gyges erschienen, sprach die Königin also: Hier sind zwei Wegen, Gyges, und ich lasse dir das wahl, welchen du gehen willst. Entweder du tödstest den Kandaules, und nimmst mich samt dem Königreich der Lyder, oder du bist hier gleich auf der Stelle des Todes, auf dass du nicht dem Kandaules in allem zu willen bist und in zukunft siehest, was du nicht sehen sollst. Also entweder er muss sterben, der solches angegeben, oder du, der du mich nacket gesehn, und gethan hast, das sich nicht ziemet.'

The simplicity and accuracy of the German translation form a striking contrast with the *verbiage* and looseness of Beloe. From the former it may be safely affirmed that both

the German student of Greek may derive real assistance, and he who is not a scholar may yet have the satisfaction of possessing as faithful a copy of Herodotus as can be made in a modern language. As our general objections to Beloe's translation are quite independent of the *particular* errors, some of which we shall presently point out, and as the passage selected is in our opinion a fair specimen of his style, we shall enable our readers, who are not Greek scholars, to form a judgment for themselves, by giving them an English translation which contains neither more nor less than the meaning of the original.

' Now Gyges, as he found it impossible to decline the proposal, was ready to obey. The king accordingly, when he thought it was about bed-time, took Gyges to the chamber ; and shortly after his wife also came. After she had entered, Gyges saw her undress ; and when her back was turned to him as she was going towards the bed, he contrived to steal out of the chamber, but she saw him as he was going out ; yet she did not shriek out, though she felt ashamed, but pretended not to notice it, being determined to be avenged on her husband, whom she knew to be the author of this plot. For among the Lydians, and indeed among the Barbari generally, even a man is very much ashamed to be seen naked.

' At the time, then, she kept perfectly silent, taking no notice at all of the affair. But at day-break, after ordering her most trusty slaves to be in readiness, she sent for Gyges, who came, not at all suspecting that she knew what had happened ; for he was in the habit of going to her whenever she sent for him. And when he came, the wife of Candaules addressed him thus : "Here are two roads before you, Gyges, and you may choose which you please. You must either kill Candaules, and then you may have me and the kingdom of the Lydians ; or you must yourself die on this very spot, to prevent you from complying with all the humours of Candaules, and from seeing again what you ought not to see. Now, then, either he must die who was the contriver of the scheme, or you who saw me naked, and have violated the usages of our country."'

We shall now proceed to notice a variety of errors in translation, which would mislead a Greek student who should take this book as a guide ; and then we shall make remarks on some important passages, relating to the geographical notions of Herodotus, by which readers not acquainted with Greek have been misled.

I., chap. 20.  $\Delta\epsilon\lambda\phi\tilde{\alpha}\nu\ o\delta\alpha\ldots\ \alpha\kappa\omega\nu\sigma\alpha\sigma$  is translated, 'I was informed at Delphi.' It should be 'by the Delphi ;' by which term a *people* is designated.

I., chap. 25. The large silver vase that Alyattes presented to the temple of the Delphi is called a ' goblet,' and

the iron stand on which it rested is called a 'saucer ;' while the art of welding iron, which Glaucus of Chios is said to have invented, is explained to be the 'art of inlaying iron.'

But this is surpassed by the next chapter, in which we are told that the people of Ephesus connected 'by some ligature their wall to the temple of the goddess *Minerva*.' The truth is, they did tie one end of a rope to the wall of their city, and the other end to the temple of *Artemis*, seven stadia distant, with the hope of putting their city under the protection of the temple. But on turning to the edition of Beloe printed in 1821, we find that, instead of this arterial ligature of Mr. Valpy's edition, the plain word rope is used : we shall make some further remarks on this. We pass over many errors, some of a trifling nature, such as 'Abas' for 'Abæ,' (chap. 46), 'the Pythian' for the 'Pythia,' &c., to the consideration of the 50th chapter, which is very badly translated. Here we have a story of Croesus making a lion of pure gold to present to the god of the Delphi : he made also one hundred and seventeen pieces of metal to support it as a pedestal, and Herodotus calls them 'half bricks,' or 'half tiles,' because their breadth was one half of their length. Beloe says, 'the larger of these were six palms long, the smaller three ;' which is not the meaning. Beloe has also retained the MS. reading *τρία ἡμιτάλαντα*, 'one talent and a half,' the weight of the pure gold tiles ; while the baser metal tiles which were of the same size, weighed each two talents. For *τρία ἡμιτάλαντα* the critics now read *τρίτον ἡμιταλαντον*, 'two talents and a half,' which correction if the editor (Mr. Valpy) did not choose to adopt, he ought at least to have mentioned in a note.

In the next chapter the two large vases, one gold and the other silver, which Croesus sent to Delphi, are called 'cisterns,' the Greek word (*χρυσὴ*) being the same that is translated in chap. 25, by the word 'goblet.' But a little further, for the sake of variety we may suppose, these same cisterns are again turned into 'goblets.'

I., chap. 56, has not escaped entirely from the translator's pen. He calls Dorus, 'the son of Hellenos,' instead of the son of 'Hellen ;' and he says that the Hellenic nation in the course of their wanderings, 'fixed themselves in *Macednum*, near Mount Pindus.' Herodotus says, 'the nation was called Macednon, while they lived on and near the range of Pindus. A fragment of a MS. of Herodotus in the British Museum has the reading *Μακεδὼν*, which is not noticed among the various readings of any of the other MSS., though from the slightness of the variation it may have been easily overlooked.'

On chap. 72 we find a note from Larcher, on which, as it is inserted in the reprint of the translation, we shall make a remark. Herodotus estimates the breadth of Asia Minor from the point opposite Cyprus to the nearest point on the Euxine, at five days' journey, or 1000 stadia, a monstrous error, the distance being at least 270 geographical miles in a straight line. *Scymnus Chios* (*Frag. Asia*, l. 192.) makes the same distance seven days' journey, and has a remark on the ignorance of Herodotus. Larcher says that *Scymnus* perhaps estimated the day's journey at 150 stadia, and as Herodotus estimated it at 200, the difference in the whole result will only be 50 stadia, 'a difference too small to put any one out of temper with our historian.' There is no occasion to be out of temper about the matter with any body; but if we must quarrel with some one, it is with the editor who prints such a note at the present day, when it is well known that there is an error of near 200 miles in the calculation of Herodotus. Niebuhr, in an essay on the geography of Herodotus, which we shall presently refer to, suggests a solution of the error; but in our opinion Herodotus had no means of exact knowledge, and consequently his statement is incorrect.

The errors in Beloe, which a person acquainted with the Greek language will discover, are so numerous that it is wearisome to point them out; many of them, it is true, would cause no kind of inconvenience to the general, that is, the careless reader, but they offend those who love accuracy, which is only another name for truth. In chap. 92, Herodotus is speaking of the magnificent presents of the superstitious Croesus to various temples of Europe and Asia. Some of these remained to the time of the historian, in Delphi, Thebes, and Ephesus: 'he presented also,' the translator goes on to say, '*as it appears*, to the Milesian Branchidæ, gifts, &c.' 'As it appears:' What does this mean? It means nothing at all; but the original is, 'as I have heard,' which is used with propriety, because the temple of the Branchidæ was pillaged and burnt by the Persians before Herodotus was born. The other temples, and their votive offerings in them, he had *seen*.

In chap. 174, we find an attempt to explain the meaning of Herodotus about the Cnidian peninsula. The whole passage is misinterpreted, and conveys no precise idea: 'The whole of this country, except the Bybassian peninsula, is surrounded with water.' If there is any meaning in this, it is that a peninsula and an isthmus are the same thing, which is proved by the following words; 'through this peninsula, which was

only five furlongs in extent (does extent mean length or breadth?), the Cnadians endeavoured to make a passage.'

In chap. 178 there is a similar confusion of terms: Babylon 'is a perfect square: each side, *by every approach*, is in length 120 furlongs; the *space occupied* by the whole is 480 furlongs.' In a matter so simple as this, it is hardly credible, unless we had it before our eyes, that so bad a translation could be made. 'By every approach' is added to make that obscure which is perfectly clear; and *space occupied* is a new way of translating the Greek words that mean the 'circuit of the city.'

From chap. 181, we shall extract a small portion of the description of the temple of Belus, giving at the same time the correct version.

'The temple of *Jupiter Belus* occupies the other division of the city, whose huge gates of brass may still be seen. It is a square building, each side of which is of the length of two furlongs. In the midst a tower rises of the solid depth and height of one furlong, on which resting as a base, seven other turrets are built in regular succession.'

The blunders of some people furnish as much matter for discussion as the ingenious discoveries of others. Herodotus does not say that 'the huge gates of brass may still be seen.' He says that the temple was large and had gates of brass, and that it existed in his time. But this is a trifle compared with what follows. A person who wishes to construct the temple of Belus, according to Beloe, must first of all make a tower 'of the solid *depth* and *height* of one furlong.' This means that it must be one furlong in height, but how much more is intended by the words 'solid depth,' it is very difficult to say. Mr. Beloe no doubt must have been startled at the prodigious height of his temple, especially as he had constructed only one story, and seven more remained to be built upon it. He therefore merely puts upon it 'seven other *turrets* in regular succession,' though Herodotus describes these turrets by the same word (*τύρεις*) that he applies to that which forms the base. To show the absurdity of Beloe's translation, it is only necessary to give the true meaning: 'In the middle of the sacred inclosure a solid tower is built, which is a stadium both in its length and breadth,' (he says nothing about its height,) 'and upon this another tower is placed, and another on that, and so on to the number of eight towers.'

It is not without reason that we notice this absurd translation, for it has caused difficulties to those who have explored and written on Babylonian antiquities, as may be seen by referring to Rich's 'Memoirs on Babylon.'

Major Rennell (p. 360), after quoting Beloe's translation, and making some appropriate remarks on the monstrosity of this tower of Beloe, adds : ' Surely Herodotus wrote breadth and *length*, and not breadth and *height*.' No doubt he did; and this short statement may serve to show how much better it is to have a reasonable share of common sense than a smattering of Greek. Major Rennell, with great modesty, assigns some share of ' whatever praise his work may deserve ' to Beloe's translation, as he followed it principally ; and Beloe takes care to remind us in his preface, that his translation gave rise to the ' Geography of Herodotus.' This is the only merit the translation has. And that truth may be stated and the memory of the truly learned may not be mingled with the blunders of the pretender, we affirm, that Major Rennell only misunderstood Herodotus where Beloe deceived him, and that frequently, as in the case of the tower, he found out the meaning of the author in spite of the translator.

These may suffice as specimens of what may be found in the first book ; and if any reader will take the trouble to examine it carefully, he may find *many* more errors quite as bad. In the third book there is a curious mistake ; Herodotus says (III. 18), that the table of the sun is daily covered with the flesh of all quadrupeds ( $\piάντων\ τῶν\ τετραπόδων$ ), which Beloe translates, ' a plain in the vicinity of the city was filled to the *height of four feet* with the roasted flesh of all kinds of animals.' The French translation is ' d'animaux à quatre pieds :'—could a mistranslation of this be the origin of the error ?

We shall now examine some passages of a different kind, where error is more excusable on account of their greater difficulty, but where accuracy is, however, absolutely essential. We refer to such passages as those in which Herodotus describes the figure of the world according to his notions, or makes remarks on the courses of rivers, sites of cities, and other matters that belong to a description of the earth. And though we doubt not that it will be readily admitted, that accuracy of translation in such passages is indispensable, there are some reasons for it which may not have presented themselves to all persons. Herodotus is an author who is constantly quoted or referred to by all travellers in the East who wish to give interest and value to their inquiries ; he must be consulted by all who write specially on ancient geography and history, as well as by all map-makers whose object it is to illustrate comparative geography. That a translator of such an author should give the real meaning is absolutely essential, to prevent those who cannot read the

Greek text from being misled in their inquiries or conclusions. But Beloe's translation is grossly defective in accuracy in these important matters, and we shall show by a few particular examples what difficulties encumber a writer on ancient geography, who is obliged to depend upon it.

In the 17th chapter of the second book, Herodotus enumerates the different branches of the Nile, and nothing is easier than to draw a small scheme which shall represent his description. Beloe has, as usual in geographical description, misunderstood the passage, and has caused no small trouble to Major Rennell, who was too acute, however, to be imposed on entirely by the nonsense of the English version. Herodotus says, that the main stream of the Nile sends off two branches at Cercasorus, one branch, the western, flowing towards Canopus, and another, the eastern, flowing to Pelusium; but the branch, which he calls the straight one, is nothing more than the main stream of the Nile, which, he adds, when it comes to the apex of the Delta, goes on in a straight line, dividing the Delta into two equal parts; and this straight and continued course of the main stream takes the name of Sebennytic from the point where it leaves the apex of the Delta at Cercasorus. This is very plain and simple; but compare Beloe's translation: 'As far as the city Cercasorus it (the Nile) proceeds in one undivided channel; but it then separates itself into three branches; that which directs itself towards the east is called the Pelusian mouth; the Canopic inclines to the west; the third, in one continued line, meets the point of the Delta, which, dividing in two, it finally pours into the sea.'

But what follows is much worse: 'and this (the third branch which he has just described) again divides itself into two branches,' the Saitic and Mendesian; both empty themselves into the sea — therefore the Sebennytic does not, though he has just said that it does. The simple meaning is, 'that besides the Pelusiac, Canopic, and Sebennytic branches, all of which reach the sea, there are two offsets from the stream of the Sebennytic, which also flow into the Mediterranean.'

One more blunder about the Nile, which shows a gross ignorance of Greek, must not be passed over. King Men, observing that the Nile a little above Memphis flowed along the base of the Libyan chain of hills, changed the course of the stream so as to make it flow in the valley at an equal distance from the Libyan and Arabian hills, ( $\tauὸν δὲ ποταμὸν ἀπρόστρεψας τὸ μέσον τῶν οὔγεων πέσειν$ ). But according to Beloe he did a greater feat than this: 'he led it (the river) by means

of a new canal through *the centre of the mountains*.' A note from Savary is appended on the supposed ancient course of the Nile near the Natron lakes, which, added to the translation, is such a mass of confusion, that it is impossible to say what was the meaning of Beloe. If any one should maintain that the translation, when fairly interpreted, particularly by contrasting it with the note, means not 'through the centre of the mountains,' but 'midway between them,' we reply, that the most that can be said for the translation is, that it is unintelligible, and that Major Rennell was misled by it, though he contrived to find out the meaning. But on comparing Mr. Valpy's edition with Beloe of 1821, we find in the latter this short note on the words, 'through the centre of the mountains.' '*Note.* Rather, *perhaps*, midway between the two chains of hills, or, in other words, through the middle of the valley. See Rennell, p. 494, *et seq.* T.' It appears then that Beloe *did* mistake the passage; and it appears also that the present editor, by omitting the short note, has made his edition less useful than the old one, which contains a partial correction of this marvellous error. But this is not all. In the original Beloe we find the note from Savary just alluded to, in which that wonder-creator says, 'The course of this ancient bed (of the Nile) may be traced across the desert by petrified wood, masts, &c., *the wrecks of vessels by which it was anciently navigated*.' Beloe, however, had sense enough to add another note, stating that Andreossi and Hornemann found that the shipmasts of Savary were merely petrified wood, not bearing any marks of the labour of man. This note, containing the correction of Savary's extravagance, the present editor has judged it expedient to omit; and as he retains Savary's note, the wonder now stands in the Family Classical Library in all its absurdity.

As we have condemned in general Beloe's translation, and particularly those parts which relate to geography, we shall confirm the sentence by reference to two other specimens. Herodotus (IV. 99) describes the figure of Scythia and part of the course of the Ister, according to his ideas. The chapter is one of acknowledged difficulty, and there may still be some discussion as to the course which Herodotus assigns to the Ister as it approaches the sea. But Beloe's translation of the first part of the chapter is entirely wrong, and he does not convey one single correct idea as to the form and position of Scythia, except that it is of a quadrilateral figure. There is a small treatise of Niebuhr on the geography of Herodotus (translated into English, Oxford), the object of which is not to ascertain what actual facts were the basis of Herodotus' notions, but to explain the ideas of the ancient historian,

and to enable a student to imagine for himself that figure of the earth's surface which the description of Herodotus supposes. The explanation of Niebuhr we believe to be correct, as it is given in the text and delineated in the map that accompanies the essay.

Again; the end of chap 101, book IV., is all confusion in Beloë. Herodotus, summing up at the end of his description, means to say as much as this: that two sides of this Scythian quadrilateral being washed by the sea, (the south-west by the Euxine and the south-east by the Palus Maeotis,) and the other two sides being bounded by the land, the length of each side of the square is 4000 stadia. Beloë says, ' Thus the extent of Scythia along its sides is 4000 stadia ; and through the *midst of it inland* is 4000 more ;' which, in plain truth, is downright nonsense.

It must be borne in mind, that the idea of Herodotus about the shape of Scythia is quite erroneous, and that therefore a modern map is not the thing, by the aid of which the student must labour to comprehend the meaning of the historian.

There is another passage in the fourth book which we shall endeavour to explain, as Niebuhr \* has not done it completely. We allude to chapters 38, 39, 40, 41, in which Herodotus is speaking of the two great *actæ*.

An *acte* is a tract of land stretching outwards into the sea, and, of course, surrounded by water, except where it joins to the continent; at which point of junction it is not necessarily narrow, and therefore it is distinct from a chersonesus or peninsula. In chap. 37, Herodotus enumerates the nations that lie between the position occupied by the Persian Gulf (for which he has no name but Erythrean Sea, the Red Sea of Beloë, with the gulf-like form of which he was unacquainted) to Colchis. Here (chap. 38) begins one of his *actæ*, which is most simply determined thus:—it is that part of Asia which lies west of a line joining the mouth of the Phasis and the Myriandric bay. The second *acte* stretches out from Persis into the Erythrean Sea; and here it must be remembered that the Persian Gulf is not supposed to exist. The *acte* goes on to the Arabian Gulf and to its northern extremity, where it does not actually or *naturally* terminate (for an *acte* can only be limited by the sea), but usage† has fixed a kind of termination there, at the Isthmus which we call that of Suez. But Herodotus has only described *one* side of the *acte*—*another* remains to be de-

\* The translation of Larcher seems to express the meaning correctly, but he has used the word ' peninsula,' which he ought not to have done.

† Οὐδὲ Αἴγαυρα εἰ μὴ νόμοι, iv. 39.

scribed, there being two main sides, as in the case of the first acte. This second side then (of the second acte) commences at the Myriandric bay, runs along the coast of Phoenice, and terminates on the Mediterranean coast, opposite the head of the Red Sea. But this is only a conventional kind of termination, for the continuation of the acte is really the peninsula of Libya (chap. 41.) ; for he says (chap. 41.), ‘ Libya lies in the second acte, for Libya immediately follows Egypt. Now this acte is very narrow at the commencement of Egypt, for it is only one hundred thousand orgyiæ from the Mediterranean to the Red Sea ; but, after this point, the acte, which is called Libya, becomes very broad.’ If Beloe’s translation be compared with this paraphrase, it will be seen that it does not give the meaning of the original. Libya, according to Herodotus, is but small when compared with Asia, and much less when compared with Europe. The actual breadth that he assigns to it is about sixteen thousand stadia, as may be ascertained, if a person will study well, and compare Book II. chap. 33, 31, 9. There is an error in Niebuhr’s map, in the western part of Libya : the coast from Soloeis southwards should bend to the south and east, for Soloeis is the most western point of Libya. Thus, the Libya of Herodotus is brought within narrow limits, and its circumnavigation by the Phoenicians would appear to him a practicable thing. Had he known its real dimensions, *that* would have been a new difficulty added to the phenomenon of the sun’s position to the north of the circumnavigators during their voyage. (See iv. 42.)

We shall add a short remark on a remark of Larcher, printed among the notes in Beloe’s translation. Herodotus says that the breadth of the Isthmus of Suez is one hundred thousand orgyiæ, or ten thousand stadia, and Larcher adds that Agrippa, as quoted by Pliny, makes the distance one hundred and twenty-five Roman miles, reckoning eight stadia to a mile, from Pelusium to Arsinoe. This is quite true : Pliny turned the one thousand stadia into Roman miles, at the rate of eight for a mile, and the result is one hundred and twenty-five miles. But the result is not made true, because a blunder of one writer is copied by another ; the real distance is not quite sixty geographical miles. Major Rennell shows (from II. 158) that Herodotus measured the breadth of the isthmus between the position of Suez and Mount Casius, which he supposed to lie in the same meridian, and hence originated an error, which is propagated in books of instruction even in the nineteenth century.

To conclude our remarks on Beloe’s translation, we affirm

that a scholar can hardly examine a single chapter without detecting such errors as will convince him that the translator was a very indifferent Greek scholar. He will also discover that the meaning of the author is frequently so perverted, that a person, unacquainted with Greek, *must* be misled by it. Who would suppose that the usage of *oīde*, so regular and almost invariable in Herodotus, *could* be misunderstood by a translator? But it is misunderstood; and in book III. chap. 97, which contains the conclusion of Darius' curious tribute list, the first part of the chapter is completely falsified.

It was not till we compared the reprint of Beloe with the original translation, that we were aware of any alterations having been made. We learn from an advertising page, stitched in one of the volumes, that Mr. Valpy is the printer and editor of the Family Classical Library. As the editor has not stated what he has done for this new edition, we are obliged to find it out as well as we can. The edition of Beloe, which we have compared with Mr. Valpy's, is that of 1821, the latest, as far as we know.

We have not found any material error in Beloe's translation corrected, but there is a considerable number of verbal alterations made, particularly in the earlier books. For example, in the chapter which we selected as a specimen of Beloe's style, we find, in the original Beloe, this passage:—  
 ‘Among the Lydians, in particular, it is deemed a matter of the greatest turpitude even for a man to be seen naked.’ By turning to the extract which has been given, it will be evident that this passage has been spoiled by the editor\*, who has removed the word ‘even’ to a wrong place. In III. 46, a ‘leather sack’ of Mr. Beloe’s is changed by the editor, and changed for the worse, into a ‘bread-basket.’ A bread-basket is not so good as a bag for holding meal, the thing about which Herodotus is speaking.

There are many other verbal alterations, but not one that we have found which is an improvement. That there is not a single one, we will not affirm. Some passages of Herodotus, which are not quite appropriate for a family circle, are altered or suppressed, with which we can find no fault, as it is perfectly consistent with the title of the book. But still it is an inconvenience to those who wish to know the real meaning of Herodotus, when he speaks of certain national usages, or religious rites. As examples of this alteration, we may cite I. 226, II. 130, II. 102, I. 94, III. 101.

The edition of Beloe of 1821 is exceedingly incorrectly

\* He may have printed from another and a worse edition of Beloe.

printed, particularly in the proper names, and in some names of plants, &c. A considerable number of these errors, indeed we may say nearly all, appear to be corrected by the latest editor; but yet such words as 'Abas' and 'Hellenus' are retained.

We believe there are no new notes in Mr. Valpy's edition, but we cannot be quite sure, because the editor has not informed us. Beloe printed a good many without any name attached to them; there are many in Mr. Valpy's edition, also, without names, but we cannot tell if there is any new one among them without reading the whole, which would be a great waste of time. Many of the notes of Beloe's edition are, however, omitted; and, in general, we think with great propriety; particularly the story of Archidice from *Aelian* (II. 135). It is true, there are some good notes attached to Beloe's translation; and when we state that many of them are extracts from Rennell, Larcher, or some respectable traveller, the assertion will be readily admitted. But it would be rather difficult to find a good original note by Beloe. His own remarks are puerile and trifling beyond measure.

When Herodotus describes (I. 93) the great sepulchral mound of Alyattes, near the lake Gygæa, Beloe remarks, 'This (the lake) still remains.' So does the lake of Geneva, mentioned by Cæsar.

Of the German translation we must add, that it is a very faithful and unadorned picture of the ancient historian, though not free from errors. In all the more difficult passages, the meaning is correctly given, and frequently in a quaint and simple style, which certainly does produce an effect very similar to that which arises from reading the original. The translator has accomplished this by attempting to imitate the manner of some of the elder German writers, and by occasionally using modes of expression not found in the ordinary written books of the present day.

Mr. Jones's reprint of Herodotus is a book in double columns, and as a specimen of typography is very beautiful. Though it is intended to be a family book, it does not omit any of those passages which Mr. Valpy takes pains either to suppress entirely, or to modify into decency. Mr. Jones, for example, keeps Beloe's note on Archidice, and also gives her a place in his index, which is that of Beloe, reprinted with its mistakes. Mr. Valpy has omitted the index.

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*The History of Herodotus, translated from the Greek.* By Isaac Littlebury. A new edition corrected. Oxford and Cambridge. 1824.

This translation having been mentioned by Beloe in his preface, and reprinted a short time ago, and sold, as we are told in the title-page, by so many booksellers, deserves a notice ; but a very short one is sufficient. As this is a corrected edition, we are not able to say what kind of a book the original was ; but it may be safely asserted that, in its present condition, it is an exceedingly bad translation. It contains all, or nearly all, the 'blunders of Beloe, (except that about the table 'covered with meat to the height of four feet,') and also some that Beloe has avoided. It is printed in a single volume, without any notes, and without the usual convenient division into chapters. Altogether it is as useless a book as we are acquainted with.

To point out particular errors would be a waste of time. The reader may examine the translations of the following chapters, for specimens of the kind of mistakes that are found in Littlebury's version. Book I., chap. 57, is completely wrong ; and also chaps. 180, 181, on the Tower of Belus, where, among other new things, we learn that the Euphrates flows into the 'Red Sea.' Beloe gives the same translation, but explains in a note what he means by the 'Red Sea.' Book II., chap. 97, the translation exactly reverses the meaning of the original. Book III., chap. 107, about the hare, is very imperfectly translated.

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*Histoire d'Hérodote, suivie de la Vie d'Homère. Nouvelle Traduction.* Par A. F. Miot, Ancien Conseiller d'Etat. 3 tom. 8vo. Avec des notes. Paris. 1822.

It was the object of M. Miot to produce a version that should faithfully express the meaning of Herodotus, and avoid various errors into which Larcher and other translators had fallen. In the notes which he has subjoined to each book, he has had in view the explanation of the subject-matter only, there being hardly any notes, or at least very few, devoted to the critical explanation of the language. In the preface we are informed by the translator that he derived some aid from various remarks of Letronne, printed in the *Journal des Savans* ; and it is apparently on this ground that some French catalogues proclaim the book to be a translation by Miot, with notes by Letronne. As we, among others, have been deceived by this trick, we mention it to put book-purchasers on their guard. The question is not, would the notes 'been better or worse if M. Letronne had written them ;

if he had written a commentary on Herodotus, we believe it would have been very good; but the fact is, the notes are by Miot, though advertised to be by Letronne in some catalogues. In the translation itself it is only fair to say, there appears no such attempt to deceive. The booksellers, however, have prefixed to the translation, by way of advertisement, a notice of it by Letronne, which originally appeared in the *Journal des Savans*.

M. Miot took the translation of Larcher, and the Latin version accompanying Schweighæuser's edition, as the basis of his new translation, deriving aid occasionally from the German version of Jacobi, and the English one of Beloe. How much real aid the last-mentioned would give, we hope to have already made apparent.

After examining M. Miot's version in a great many difficult passages, we are bound to say, that in most of them he has given the true meaning. The fact is, if he always kept close to his two principal guides, he could rarely fall into any great error. But there are mistakes, many of them it is true of small importance, which make us suspect that M. Miot has but an indifferent knowledge of the original, and that he would have made a very poor translation had he been left to his own resources. As examples, we refer to Book I., chap. 61, where Herodotus is speaking of the second marriage of Pisistratus:—‘parce qu'il avait, avant ce mariage, deux fils encore jeunes, et qui étaient déjà regardés comme compris dans l'anathème porté contre les Alcmæonides,’ &c. The two sons of Pisistratus were not affected by the religious ban under which the house of Alcmæon was: the meaning of the original is entirely perverted. Again, Book I., chap. 76, we find, ‘Crœsus . . . arriva dans cette partie de la Cappadoce que l'on nomme Ptérie; c'est une contrée d'un très-difficile accès, qui s'étend jusques à Sinope, ville située presque sur le Pont-Euxin.’ The real translation is, ‘Crœsus . . . came to that part of Cappadocia called Pteria. Now Pteria is the strongest place in this district, and it lies pretty nearly in a line with Sinope, a city on the Euxine.’ In Book I., chap. 80, the same word *κατά* is again mistranslated, ‘l'Hermus . . . a son embouchure près\* de la ville de Phocée.’ The Hermus has not its embouchure *near* the town of Phocæa; nor does Herodotus say that it has. Another signal blunder occurs in

\* Schweighæuser translates *κατά*, *juxta*; and Math.' Gr. Gr. § 581, gives this instance as an example of *κατά* signifying ‘near, in the neighbourhood of.’ This is not correct. Comp. Book I. 76, above referred to; II. 75, &c.: *κατά* in these passages is used to define the position of *one* place by correcting it with the position of some *other* place. Of course the most *conspicuous* and the *nearest* would be preferred. But *nearness* is quite a subordinate idea in this usage of *κατά*. *Πλατά* means *close to* in Herodotus, IV. 90, &c.

Book I., chap. 93, where we are told of the great sepulchral mound of Alyattes, that—‘un grand lac l’entoure.’ M. Miot ought to know that the lake Gygræa does not *surround* the mound of Alyattes, which merely stands near it. (See Chandler, *Asia Minor*, p. 262;) still more, a translator of Herodotus should know the usage of the verb ἔχειν. We may remark once for all, that M. Miot’s geographical notes are very few, and also of very little value.

We cannot avoid making a few remarks on Book I., chap. 143, a passage of some little difficulty, and entirely misunderstood by the French translator. Instead of pointing out all his errors, we shall give the real meaning of the passage, premising that we do not adhere to the common punctuation. The word οὗτοι, l. 5, does not refer to the Milesians and islanders, as Miot supposes, but to the word ‘Iωνες, l. i., chap. 142:—

‘Now these Ionians’ (the twelve states of Asia) ‘became separated from the rest of the Ionians in no other way than this: the whole Hellenic nation formerly being weak and inconsiderable, the Ionic division of it was by far the weakest; for except Athens, there was no city of any note among them. The rest of the Ionians then, and the Athenians, renounced the name, not liking to be called Ionians. But these twelve states were proud of this national appellation,’ &c.

If the reader will take the pains to study this passage, he will see the importance of understanding it right.

We object also to the following translation of Φωκεῖς ἀποδέσμοι (book I., chap. 146), as having no meaning in it: ‘quelques Phocidiens détachés de leur patrie.’ Beloe gets over the difficulty by translating it simply by the barbarous word ‘Phocidians.’

The notes on Book I. fill about fifty pages, a space far from sufficient to allow a complete commentary, but still enough to illustrate many important passages. The author supposes (I. 57), that Herodotus is mistaken in denying that there was any similarity between the language of the Pelasgi of his day, and that of the Hellenes. And in this opinion we concur, believing that there is sufficient evidence even in Herodotus himself to disprove his opinion about the language of the Pelasgi. But we do not agree with M. Miot in deducing the name *Pelasgi*, from πέλλας, *old*, and γῆ, *earth*; nor do we think that discussions on the *origin* of the Pelasgi are of any value at all. To trace them as far back as we have any satisfactory evidence, is consistent with sound criticism: to attempt by guesses to advance beyond this limit is mere trifling.

There is a very good note on the θηλεῖα νόος, which Herodotus mentions (I. 105) as common among the Scythians.

A few facts dispel much learned conjecture. M. Miot says, that the Enarees (for so historians call the miserable wretches who were struck with this disease) are those who had lost the most obvious characteristics of the male sex, such as the beard, and the strongly-marked masculine features, and in fact had assumed the appearance of withered old women. This disease, whatever may be its origin, is said still to occur occasionally among the Nogay Tartars. Another note, on chapter 199, appears to us to contain some very curious facts, and a just defence of Herodotus's account of the religious prostitutions enforced by the ecclesiastical code of Babylon. M. Miot shows that times comparatively modern furnish us with undoubted evidence of still more gross violations of decency, practised too under the sanction of a purer religion. We mark this short reference to this chapter of Herodotus, because some not very profound thinkers have either treated with contempt these curious notices of national usages, or have at once denied the truth of them altogether. We consider all facts relating to national customs to have a high value for those who, in studying the moral constitution of man, are accustomed to extend their view beyond the parish in which they happen to live.

M. Miot, in his note on I. 203, chimes in with most of the commentators in praising Herodotus for giving to the Caspian sea its true character of a lake, and assigning its relative length and breadth. But we may remark with Niebuhr that, though Herodotus has the merit of knowing that the Caspian sea had no connection with the northern ocean, yet there is no indication that he knew in which direction its length lay.

Before we conclude, we think we ought to do justice to M. Miot, by pointing out some other good notes, as we have censured his translation to a certain extent, and, as we believe, with perfect fairness. On the Egyptian year (II. 4,) M. Miot labours to show that the ancient Egyptians must have been very inexact observers of the heavenly phenomena, if they could not bring their civil year nearer to the truth than 365 days. Besides this, M. Miot attempts to show, and, as we believe, fairly, that the introduction of the Sothiac period of 1460 years, intended to rectify the error, which was annually accumulating, was not used before the Greek astronomers pointed out their miscalculation to the Egyptian priests. And even the Sothiac period was not a sufficient correction of the error.

In his remarks on the crocodile (II. 58,) M. Miot has contrasted with each important fact mentioned by Herodotus, the corresponding remarks and observations of M. Geoffroi, who accompanied the French expedition to Egypt, and had

opportunities of verifying what Herodotus has recorded about this amphibious animal. This appears to us to be an excellent mode of commenting on an ancient writer ; and we do sincerely hope that in this country, where so much time is spent on what is called classical learning, we may at last begin to see that to know only the words of an author is to have a very imperfect acquaintance with him. As we are speaking of the second book of Herodotus, we cannot help remarking that in one passage (II. 182) the word Hellas is carelessly translated ‘Grèce’ ; but what will the ordinary reader make of this passage when he finds Cyrene, Rhodes, and Samos comprehended under this term ? These places were included in the Hellas of *Herodotus*, but not in *our* Greece.

On a passage of the third book we have a short remark to make, as the attempts at explanation which we have hitherto seen, are not satisfactory. Herodotus says (III. 104), that among the Indians the heat is greatest early in the morning, at noon it is less violent, and in the evening the atmosphere becomes very cool. Various solutions of this difficulty have been offered ; but we think all of them erroneous. What Herodotus tells us is not a real fact, but a misconception founded on a prior one. According to his theory of the earth, it is a plain surface, extended in all directions, till it meets the heavens. The Indians in geographical position lie nearer to the rising sun than any other people that he knew ; and in the morning they would consequently feel the effect of the sun’s rays more powerfully than at noon and evening, when (according to the theory of Herodotus) he would be further removed from them.

We have chosen for our remarks these few passages as specimens of the way in which M. Miot has discussed some of the more important passages of Herodotus ; and in our criticisms both on him and Beloe it will be observed that we have selected the first four books, which we have done on account of the greater difficulties which they contain. With the exception of some parts of the seventh book, the five last books of Herodotus present comparatively fewer difficulties than the first four.

Before taking leave of M. Miot, we must observe that he has entirely mistaken Herodotus’s description of the figure of Scythia, and that he has not derived all the aid which he might, from Major Rennell’s Geography, to which he gives his readers a general reference in his preface. M. Miot has carefully marked by a dotted line in his map, what he conceives to be the Scythia of Herodotus, but which no one who understands the Greek will for a moment allow to be a correct delineation.

Chronological tables are affixed to each book. The dates frequently differ from those which we are inclined to prefer. For example, in the period contained in the 6th book we find the capture of Miletus placed in B. C. 498; the date now more commonly received being B. C. 495.

A map intended to illustrate the geography of Herodotus is found at the end of the third volume. The position of the different peoples, and the satrapy division of Darius are given according to Major Rennell's system; but the modern improvements in geography required, as we are told in a note on the map, considerable alterations to be made in the physical character of Rennell's maps. Great improvements, it is said, have been made about the Black Sea, the Lakes Van, and Urmia, &c., which we will not deny, not yet being able either to verify or to disprove the assertion. But we will venture to say, that a less founded claim to improvement in map-making has seldom been put forth. The whole of the country watered by the Tigris, Euphrates and the other great streams that flow into the Persian gulf, together with the gulf itself and all the country east of it, requires a complete reformation. We affirm the same of the coast of Africa immediately west of the Delta, which is altogether at variance with the latest charts. An examination into the geographical positions of the map would not induce us to change the opinions already expressed.

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#### HISTORIA GRÆCA.

*Herodoti Historiarum Lib. I. Thucydidis De Bello Peloponnesiaco, Lib. I. Lib. II. c. 1—7. Xenophontis Historiæ Græcæ, Lib. V. Demosthenis Orationes Philippica I. Olynthiaca I. (III.) Philippica II. In usum Regiæ Scholæ Westmonasteriensis.* 1830.

THE above is the title of a single volume which we have lately seen. It contains a series of extracts from Greek authors, intended to furnish the students with specimens of the extant historical writers (for the orators also are historians) from the time of Herodotus to the age of Demosthenes. We believe that, till within the last few years, it has been the practice in our great schools to neglect the historians nearly altogether, confining the student principally to the reading of the poets, and the making of verses. The mechanical dexterity acquired in stringing together syllables called long and short, will seem to all sensible people but a poor accomplishment after so many years' labour, and a wretched substitute for real knowledge.

We are therefore exceedingly delighted to see that a Westminster student will now, in addition to the poets, acquire a very fair stock of prose Greek and historical knowledge during the school course. By combining with the study of the Greek text the perusal of some good compendium of Grecian history, he will form an exact estimate of the periods to which the extracts belong, and he will know also how much of an author he has read. And if to this should be added the constant use of good maps, and occasional remarks by the teacher himself on the history, geography, and the words of the text, we think a very great improvement will be made. Though we are much in favour of reading an entire author, or at least a very large portion, for reasons unnecessary now to state at length, yet we cannot find fault with this for being a book of mere extracts. It is not like the miserable compilation of Dalzel, a collection of scraps from writers of all ages, some good, and others good for very little, but it consists of entire large portions taken only from writers of the best period.

It is not stated (there being no preface to the book) what text has been chosen by the editor. On comparing however the first book of Thucydides with Bekker, we find that the Westminster book agrees with that text in the few difficult passages that we referred to. We presume therefore that the whole is founded on good authority. To each historical book is prefixed a summary or table of contents, which would be very useful if it were not in Latin. Boys generally do not take the trouble to read notes, or prefaces, or summaries, written in Latin not always easy to understand, and printed in a type and form disagreeable to the eye. And we think boys do quite right, being just as unwilling as they are to encounter such unnecessary trouble.

There are no notes at all to this book, which we consider a very great advantage. It is true, a note system is fast gaining ground, specious and attractive at first sight, but based on a principle which tends to destroy what little knowledge of Latin and Greek is left among us. It is not possible to give anything like a reasonable commentary on a Greek or Latin author in a few notes attached to the bottom of a page. A complete or even a very incomplete illustration of a classical author requires a separate volume, and often several; and what reason is there for encumbering the text book with notes, which are often worse than useless? Can they not be printed in a separate volume for the use of those who want them? If we had good commentaries in English on the authors generally read, schoolmasters would be furnished with the means of explaining the text to their pupils

in a more complete and consequently more attractive manner. But the small note system exercises a pernicious influence both on master and scholar ; it gives them just enough to prevent them from looking for more, and the narrow bounds which the small note issuer fixes to inquiries both philological and historical become the limits which his disciples never pass.

For the pupil a few useful books of reference in English, some good maps, and a plain, *cheap*, and correct text without notes—this is all that *he* wants. As for the master, some good books of reference of a higher kind which *he ought* to study, and, if such a thing could be found, a commentary full and complete on the author that *he* is explaining—these are the store-houses from which *he* should draw that information, which it is his duty to communicate to the pupil *orally*, *briefly*, and *perspicuously*. Wherever text-books without notes are used by the pupil, the diligent teacher must and will look for that information which the pupil will and ought to expect. After the teacher has given the information, and referred the learner to books for the purpose of extending it, *then* he can fairly require of the pupil, that *he* should recollect the instruction that *he* has received, and prove, by his answers on examination, that *he* has not neglected to profit by his teacher's kindness and assiduity. Nothing is more preposterous than the tyranny of schoolmasters in expecting a pupil to come up to his lesson with a complete knowledge of all that is in it. When the scholar has made some progress, the master may reasonably expect that *he* should not stop at small difficulties ; but when the pupil has done his best, there will always remain enough for the tutor to explain, and if *he* does not do so, *he* does not fulfil his duty.

But though improvement is rapidly making in some of our old and truly respectable schools, and new ones springing up around them furnish a fresh motive for active and honourable exertion, what is the condition of a large part of the countless number of public and private grammar-schools scattered over this wealthy country, and crowded round the neighbourhood of the metropolis ? Those who have had opportunities of seeing into these places know well, that ignorance almost incredible directs many of them—not ignorance of such useful knowledge as geography, arithmetic, modern languages, or the natural sciences, for this knowledge is not expected from them—but the grossest ignorance of that which it has been the business of their master's life to learn and teach, the Latin and Greek languages. Could those parents, who entrust their hopeful sons to school, judge of

the commodity for which they pay, as well as they can of the substantial necessaries of life, the schoolmasters would soon find, that to secure their customers they must furnish a better article. In stating these opinions, which, as applicable to a very great number of schools, we know to be supported by facts, we would not, if we could avoid it, give pain to one single teacher who honestly endeavours to discharge his duty. Many of them labour earnestly and faithfully, and do the best they can ; they do the best that can be done under the present circumstances. A wise and a popular government, one that had a real sympathy with the people, would labour to promote the cause of education *in every degree*; for the higher kind of education calls for aid and assistance as well as the education of the poor. No real or extensive improvement will be made till men are trained to be teachers, and sent out after examination and probation with such a certificate as will secure people from being imposed on by unqualified persons. Such teachers would soon find employment, and their certificate would save them from the necessity of applying to a school agent, who, if he be a knave or a fool—no uncommon case—will cheat all parties, and himself be the only real gainer. The metropolis offers easy and ready means to the friends of education for forming a plan on an extensive scale for the instruction of persons who wish to become teachers ; and we hope that this important subject may soon be taken up by those, who have sufficient influence to carry it into effect.

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#### READING MADE EASY.

*Infant Emancipation, or Reading made easy.* London. 1830.

It seems rather surprising, that no steps have been taken, long ere this, to facilitate what is commonly, but perhaps wrongly, reckoned as the very first step in elementary instruction—namely, learning to read. The question naturally occurs, Is the old method, on which we and our fore-fathers have been taught to spell our horn-books, the best adapted to accomplish its end, and incapable of any improvement? When we look back upon our childhood, is the retrospect of this branch of our education pleasing or otherwise? When ordinary troubles are over and known only in remembrance, they generally appear to have been exaggerated or too severely felt ; but, as respects learning to read, we certainly in childhood found it to be a most arduous attainment, and we recollect it to have been the source of

continual sorrow and disgust ; nor even now does the difficulty of the task sink much in our estimation, when we consider the preposterous method adopted in teaching children to read. Let us now look at children that are taught as we were : is the case different, and does the mind of a child, whose affections are so lively and perceptive faculties so actively in operation, leave his pastimes and address himself to his task with any feeling short of positive disgust ? Is this as it should be ? This, however, is not all. We would ask yet again—Is the progress made by pupils according to the received method, satisfactory or not ? It is a notorious fact, that a year is reckoned a very short time for a child to gain even a tolerable proficiency in the rudiments of reading, and that many children are employed at this work for two or three years, and sometimes longer, before they can read their mother tongue correctly.

These statements having been made, for the truth of which an appeal is made to all candid persons, it remains for us to inquire, whether the present system is defective in itself, or whether the fault rests merely with those who apply it to practice. Much, indeed, of a child's progress will depend on the moral character of the teacher, and his fitness for the business of tuition. The dispositions of teachers vary. One may be kind and prepossessing in manners, and so exert a powerful influence over the child's will and affections ; while another of less kindly nature is impatient and ill-humoured, and communicates all his unamiable feelings to his pupil, without possessing any useful influence over him. One sees the child, as he is, volatile and playful, —in short, a child ; the other forgets the disparity of their years and intellect, and feels surprised and disappointed at what he calls the lad's stupidity, merely because himself is stupid enough to forget, that he has a child to teach and not a man. This, however, unless we except some few peculiarities of individual characters, is the extent of the evil as respects teachers ; and these objections will apply to every branch of instruction as well as this. The real root of the evil complained of is to be found in the plan itself, which is neither *natural* nor *correct*. The common plan of teaching to read is not *natural*, because it is not adapted to the minds of children. It commences with unmeaning abstractions—sounds without ideas attached to them ; and during the process no connexion is maintained, immediately or more remotely, with the concerns and objects which interest and delight the active mind of childhood. The plan in common use is not *correct*, because it does not give a true and distinct notion, nor indeed any precise notion at all, of the power of

letters and syllables. For instance, a child, after having been taught to recognise his letters at sight and to call them by their names, is taught, in his first lessons on the combination of the letters, that *bee-a* spells *ba*, *cee-a,—ka*, *dee-a,—da*, *eff-a,—fu*, &c., and, as he proceeds further, *bee-a-tee,—bat*, *cee-a-tee,—cat*, *eff-a-tee,—fat*, &c., until at length he learns that *dee-ar-i-en-ku* are all comprised in the single sound *drink*. By this method, the *names* and *powers* of the letters are confounded, and much time is afterwards necessarily spent in unlearning the wrong notions acquired at the commencement. The fact is, the power of letters is generally very different from any notion which the mere name of them would give ; for example, the *name* of the letter *w* has no more resemblance to its *sound* in such words as *wine*, *wet*, &c., than the name *John* has to any individual who bears it. This must be the case with nearly all the consonants ; for it is impossible to pronounce them completely by themselves, but only when accompanied by a vowel sound. Every expiration with sound produces a vowel accompanied or not by the action of the organs of the mouth which produces the consonants.\* The internal formation of the organs to produce a consonant will, except in a few cases, make no distinct sound ; and the consonant sound is only distinctly perceived by the aid of the accompanying vowel sound. The consonant *B*, then, is not correctly represented, as regards its power, by *BEE* ; for *BEE* represents more than *B*, namely, *B* and the vowels which follow it.

It may, perhaps, be thought that the objections here urged to the common method of teaching to spell and read are far-fetched and hypercritical. Long habit may have consecrated the old usage ; but still it is submitted that these remarks are practical. That the present method of teaching to read is a cause of much needless trouble and delay, may be satisfactorily proved to any one, who will for experiment take the pains to instruct one pupil by the means here proposed, viz. by always giving him *the power of the letters as found in words*, which are the matter of the language, and then making him acquainted with their *organic* formation ; and lastly, if it shall then be found requisite, teaching the names of the letters. This way will be found clear, and free from the objections which are justly raised against the old plan.

The book entitled ‘Infant Emancipation,’ rather a pe-

\* Teachers will find it very useful to have some knowledge of the physiology of Speech. This may be gained by a patient attention to the mode of pronouncing the letters. Some valuable remarks on this subject may be seen in a paper by Dr. Marshall Hall, *Journal of the Royal Institution of Great Britain*, No. 37, Vol. xix.

dantic name for a spelling-book, professes to be a development of the principle which has been briefly explained above. It would have been well, if the authoress had explained the details of her plan more at large for the benefit of teachers. Had she reflected how little trouble such persons usually take to think for themselves, she would have rendered the book more useful by giving with it some plain directions for using it, and by stating, where it is wanted, the reasons for the adoption of certain plans in the detail of her work. In the absence of such necessary information, it seems desirable that an attempt should be made to acquaint the reader with the contents of the book and plan of teaching proposed by its authoress.

A few short and simple words expressing ideas familiar to children (many of which might with advantage be exhibited *objectively* at the same time by the aid of drawings) form the opening lessons of the book. These are introduced in order to acquaint the children with the most elementary syllables which they contain; as *cat-at*, *man-an*, *brad-ad*, &c. The learner is thus not only taught the appearance of the whole word, but he becomes also acquainted with the *echo-syllable*, as it is called (as *at* in *cat*), and besides this, in most cases, with the appearance and *true sound* of the preceding single or complex consonant sounds which serve to make up the whole word. Very gradual advancement in the few first lessons, and constant repetition both of the *key-words* and *echo-syllables*, tend to fix permanently in the memory every particle of knowledge acquired; and the occasional promiscuous arrangement of the syllables which have been learnt (or, what would perhaps be better still, exercise in books accidentally opened for the purpose of discovering syllables) leads the pupil to detect them readily at sight wherever they occur. A few words and syllables having been thus thoroughly learnt, an addition is made to their number, and in a very short time all or the chief monosyllabic changes will have been gone through. An easy reading lesson, some simple-worded story for instance, is recommended at this stage, that the child may see by the facility with which he gets through it, the application and value of his past exertions, and thus be stimulated to exertion in surmounting future difficulties. The next step in the method is the process of abstraction. First, the echo-syllables, and then the simple letters are brought before him, and by frequent exercise he is made familiarly acquainted with the nature and power of each. A few lessons on the more complex pronunciation of united consonants, always with reference to their organic formation, follow those just mentioned. These lessons having

been patiently gone through, nearly all the difficulties of reading will have been overcome. All easy sentences will be read with very little trouble, while continual practice, and the occasional admonition of the teacher, will guide the child to the right pronunciation of the irregular syllables, such as *is*, pronounced *iz*, *to—too*, *one—wun*, the terminatives *tial—shal*, *tion—shon*, *ous—us*, &c. Lists of words containing silent or ‘idle’ letters, such as *gh* in *nigh*, *k—w* in *know*, *ugh* in *dough*, *w* in *wrap*, &c., are given, in order that they may be referred to and explained whenever they occur in reading. One reading lesson is given at the end of the book as a specimen of the manner in which the assistance is to be given by the teacher when difficulties occur either from irregularity or absence of power in letters. The child thus instructed will soon learn to enjoy what he reads, and his task will, we are told, and we believe it, be fully accomplished in the course of a few months.

There are defects in the book before us. The analysis and abstraction of syllables begins too soon, and the good old plan is too rigidly adhered to, of introducing the learner, at a very early period, to the *interesting* mysteries of *ban*, *bac*, *bab*, *baf*, *bam*, *bax*, &c. It seems, to us at least, more judicious to ground reading lessons on matter which is of itself interesting and likely to command attention. It appears quite possible (and certainly more pleasing both to teacher and child) to make such a piece as the Scripture story of ‘Joseph and his brethren,’ (which we recollect to have read as a story-book with great interest,) or some other little book, as, for instance, some of Mrs. Barbauld’s or Trimmer’s, or Miss Edgeworth’s, the groundwork of instruction in reading, instead of the senseless syllables and unconnected and ill-arranged words which disfigure the book before us. We object also to the method adopted for the pronunciation of the consonants, *b* as the syllable *be* in French, when the *e* is mute, and so of the other consonants. We know no reason why the consonants should be known otherwise than with respect to their power in connexion with vowels in words. Some of them, as *s*, *r*, can be sounded alone almost, perhaps quite as completely, as a vowel; but properly, the consonant sounds are only learned in connexion with the vowel sounds.

Another and more serious objection to the book is, that it occasionally gives wrong views of etymology. No measure of expediency for the mere sake of sound can, it is presumed, justify the incorrect division of syllables. That etymological truth has been sacrificed in this respect cannot be doubted. Instance the following: *sa-vor*, *na-val*, *ad-mit-*

-ting, des-troy, u-ni-ted, dis-per-sed, &c. Such egregious blunders are common enough in the *valuable* compositions of Mavor, Vyse, and Pinnock; but something better is expected in a book which has justly higher claims on the attention of mothers and teachers. 'Infant Emancipation' is not without its faults, as it has been proved; but its principles are good, and with the exceptions above stated, they have been faithfully and judiciously applied to practice.

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#### JACOTOT'S SYSTEM OF EDUCATION.

*A Compendious Exposition of the Principles and Practice of Professor Jacotot's System of Education.* By Joseph Payne. pp. 56. London.

THE system of education established by M. Jacotot, Professor of the French language at the University of Louvain, called 'Universal Instruction,' and 'Intellectual Emancipation,' has been much talked of in this country, but yet more in France, the Netherlands, and Germany. It has found many advocates who have spared no pains to make its merits known, not only by exhibiting its principles and practical details, but also by most indiscriminating laudatory notices, accompanied by the most absurd panegyrics on him who is called its founder. Much has been written on the system, and among other explainers of it, M. Jacotot himself has sent forth three volumes to expound his doctrines to the world; but his book, it is to be feared, requires to be expounded itself,—for we have not yet met with any one that could understand it completely.

The system of Jacotot is unquestionably attracting great attention, and the subject is of an importance to demand some consideration. It will be observed that this article has for its object principally to notice some of the Jacotot *methods*. The Jacotot *course of studies* requires a separate examination. It is accordingly proposed to give some account of the method, as it is explained by an Englishman, (who, it is believed, went to Louvain and saw it in operation,) the first who has written a notice of it in a separate form. Mr. Payne, the writer of the pamphlet entitled 'A Compendious Exposition,' &c., writes in the spirit of advocacy, and does not always judge impartially of the merits and demerits of the system; and it will, therefore, be necessary, while we give a sort of analysis of his book, to make occasional strictures upon it, in order that the reader may have a *fair* view of the method described in it, neither too favourable, nor, it is hoped, too far on the contrary side.

Mr. Payne's book opens with an explanation of one of Ja-

cotot's principles (which, by the way, are reduced into sayings or proverbs continually uttered by the founder and his disciples), LEARN SOMETHING THOROUGHLY, AND REFER EVERY THING ELSE TO IT. 'This sentence,' says the English expositor, 'comprises the entire method of Jacotot,' and 'when-ever this precept is neglected, the constitutional character of the system is disregarded. Again, 'the spirit of it so completely pervades every part of the machinery of the method, that the one cannot by any means be separated from the other.' The above precept is valuable, and we subscribe to its worth most willingly ; but surely the *inventor* of this method does not claim any originality for this remark. It has been applied to practice, as Mr. Payne acknowledges, in p. 6 of his pamphlet, by every one who has ever learnt any science effectually. The merit of M. Jacotot consists in applying the principle more extensively, and the novelty of his plan, in this respect, appears the more forcibly from the very imperfect manner in which *any* knowledge is commonly acquired at school. Of the old system (the term is incorrect, for it is not a *system*) of instruction, Mr. Payne justly observes as follows :—

'It may not be amiss to consider, in the first instance, what is generally meant by the expression,—*learning a thing*. To learn any thing is evidently not the same as to forget it; yet we might almost imagine it were, by referring a moment to the common plan pursued in the old method. Will any one maintain that, speaking generally, at the end of his seven years or more of school instruction, he actually recollects one thousandth part of the facts that have been brought before him, or the observations that have been addressed to him, connected with the course of tuition ? A considerable portion of all this combined mass of information has remained perfectly unintelligible to him, from the first moment that it was introduced to his notice, to the time at which he throws down his books and enters on the world. He perceived neither the end nor the design of it; and perhaps even the terms in which it was expressed were never thoroughly comprehended, although repeated incessantly in his hearing. In illustration of this it may be asked, Does one child in a hundred understand a single page of that book which is put into his hands as soon as he can read, and over which he pores, year after year, and, at length, by dint of constant repetition, has thoroughly impressed on his memory—the English Grammar ? This may well be doubted. He learns, indeed, what is to him a jargon of unintelligible technicalities, like nothing that he meets with in the conversation of his comrades and friends, or in the language of those juvenile volumes which a nascent taste for reading may induce him to peruse : and after all, he is at a loss to conceive of what use it is for him then to know, that a verb is a word which signifies to be, to do, or to suffer ; or that there are two kinds of conjunctions, the copulative and the disjunctive. It

would be absurd to ask him if he thoroughly understands these words, for it is quite impossible, even if the individual terms be explained to him ; if, for instance, he perceives tolerably well what is meant by the words conjunction, copulative, and disjunctive, how can any idea be received into his mind of a something which separates while it joins ; and, even supposing the present difficulty surmounted, does not the question incessantly recur to him, What is the use of all this ? You tell him he cannot speak properly unless he understands grammar ; but he does not, he cannot, perceive why it should be so ; and perhaps he wonders how it is that he contrives to utter a correct sentence without recollecting, at the moment of utterance, all the grammatical rules which have been so constantly urged upon his attention. He however infers, that he does very often speak correctly, because he uses the same expressions as everybody else ; and the point of mystery is, that he chances to do so without remembering the rules of grammar. The same remarks will apply, more or less, to many others of the generalities which, in the common course of instruction, a pupil is called upon to learn, but which he cannot, from a want of the information previously requisite, understand. Even, however, supposing that he does actually acquire a number of really useful facts, they form in his mind an *indigesta moles*, a shapeless mass, in which he perceives neither order nor connexion.'—pp. 2, 3.

' After sedulously going through all the manœuvres of instruction for several years, we come from school to begin our education afresh, according to the particular objects which it may be desirable for us to attain in life. We are in possession, indeed, of a vast number of facts, but they lie for the most part unconnectedly and incoherently in the mind. Of a number of others we have a loose and vague notion, just sufficient to admit of consciousness that they exist, and have names attached to them, which names we know well, without knowing the things themselves. Still less, however, in these latter fragments of knowledge than in the former, do we perceive any sort of coherency or natural connexion : and upon a review of the whole of our acquirements, during the long time that we have been employed in making them, the feeling which takes full possession of our mind is,—that nine-tenths of all that we learned has been forgotten,—that we are well acquainted with no one subject whatever,—and that in nearly every point which most concerns us, we are—

Unpractis'd, unprepar'd, and still to seek.'—p. 5.

The learner taught by a Jacotot master is led to acquaint *himself* (for Jacotot, *no less than Pestalozzi did years before him*, forbids the teacher to *explain* and communicate to the *passive* mind of the child) with a particular set of facts which he learns thoroughly, so that they may be perfectly and permanently remembered, and from these he is expected to derive every other fact and particle of knowledge which he is desirous

of acquiring ; for it is one of Jacotot's principles that ALL IS IN ALL, or more intelligibly, that each fact, with which he becomes acquainted, and especially each group of facts, is so intimately connected with every other fact and group of facts, that the latter may be evolved from the former. By the *continually active* operation of the mental faculties, which *must* result from the adoption of his plans, we are told—and to a certain degree we believe it—that a great deal is effected which is not done by other means. 'It may be said,' observes Mr. Payne, 'that

Children cannot criticise individual words and expressions, and perceive the design, or detect the faults and beauties of an admired literary composition. To this it is answered, that M. Jacotot has imagined, or, to speak correctly, has *proved* beyond a doubt, that little girls and boys, of between the ages of ten and fourteen, can do every thing here enumerated, not only with the classical authors of their own language, but with those of any foreign language (living or dead) which they may be studying ;—and the observations referred to embrace in part the method of the system. The pupil of the Universal Instruction is taught to believe, that every word used by a good writer modifies in some respect the idea intended to be conveyed, and that, therefore, to understand the whole, he must understand each individual part : and he is never said to have learned a thing which he does not thoroughly comprehend (that is, receive altogether) in his mind, by an accurate perception of every subordinate notion and of all its relations with what he has previously learned. The knowledge thus gained is not likely to escape quickly from the mind ; and the practice of incessant repetition, which is the soul of the system, renders permanent the first and all intervening ideas received by the understanding ; so that of the mass of information, ever rolling on, and becoming augmented by contributions from all sides, it may be justly said—

Vires acquirit eundo.'

Let us now see how M. Jacotot's principles are applied to the various branches of education,—and first of all to the most elementary, namely, to reading and writing. Here we are informed of the startling fact, that 'the pupils of Jacotot learn to read and write in about a fortnight.' To prevent any misunderstanding of what is meant by this, Mr. Payne adds, 'at the termination of which period they are deemed capable of beginning the study of the vernacular language, according to the method which will shortly be explained.' In beginning to learn to read, the child, instead of going through the dull routine of learning the alphabet, and then spelling bee-a,—ba, cee-a,—ca, &c., and wading through primers, and first-reading-books, &c., to his infinite disgust, is introduced at once to some standard classical work, such as *Telemaeus*. Those who cannot agree in the paradoxical dictum

of Jacotot—that ALL INTELLIGENCES ARE EQUAL, will probably be of opinion that a book more adapted to a child's years and understanding, for instance, some story or collection of stories from ancient or modern history, or some elementary book on natural history would serve the teacher's purpose better, and be a much more rational basis for all his future acquirements.

Mr. Payne selects for the illustration of Jacotot's method the English translation of Telemachus. The child is taught to read, as follows :—

‘ The opening sentence of the first book runs as follows :

‘ “ The grief of Calypso for the departure of Ulysses would admit of no comfort.”

‘ Pointing to the word “ The,” the master pronounces it in a very distinct tone, and directs the pupil to repeat it after him. He then recommences with the first word and adds the second, and the two words are repeated in succession by the pupil. Beginning again, the third word is added, and the three are repeated by the child accordingly. The same process is used with the fourth word; still recommencing with the first. A pause is now made, and the pupil is at once called upon to exercise his faculty of noticing resemblances and differences. He is asked to point out the respective situations of the words “ Calypso,” “ grief,” “ of,” “ the ;” the interrogation, after this manner, being continued till he can show, without the slightest hesitation, the place of each. He thus learns to distinguish them from one another. Any page of the book is then opened, and some particular sentence or line being pointed out to him, he is asked if the words that he knows are to be found there. As soon as the master is assured that the child is in thorough possession of these four words, he goes on adding successively the remaining words of the sentence, always recommencing with the first. The process of interrogation pursued at the end of the first four words is now repeated with each word of the sentence, until the child learns accurately to distinguish those words which are different, to recognise the likeness between those which are similar, and to point out any word of this sentence in any page of the book that may be opened before him. Proceeding according to strict analysis, the master now recommences the examination of each word of the sentence, dividing every word of more than one syllable into its component syllables, thus—“ The grief of Ca-lyp-so for the de-par-ture,” &c. The pupil is then called upon to notice and distinguish each syllable, after the same plan as that pursued with respect to entire words, and, at length, he is made acquainted with the name of every letter. After he has been well exercised, in this manner, upon a few sentences, the teacher directs him to go on by himself, without previously pronouncing the words to him, and only assists him when he meets with a word, syllable, or letter, which has never before come under his notice. Still, however, he *must recommence with the*

*first word learned*, as it is by this means only that all his previous acquisitions are permanently retained. He soon begins to have the first three or four sentences, thus so frequently repeated, impressed on his memory, and is told to spell them, dividing them into their component syllables and letters from recollection. After about sixty lines have been thus gone through, he cannot fail to be acquainted with nearly all, if not all, the letters of the alphabet, and with a vast variety of their combinations. It is, indeed, considered, that he is now taught to read. If any hesitation, indicative of imperfect perception, is evident in the pupil, the master must return to the same words, syllables, or letters, until they are thoroughly distinguished and comprehended.'—pp. 10, 11.

By adopting this plan, it is thought that the fatigue and disgust usually felt by children in learning this difficult branch of knowledge are nearly, if not entirely, avoided—*1st*, because the mind is not, as in the usual system, a mere inert subject, receiving impressions, but actively employed in noticing resemblances and differences, in judging, analysing, and generalizing;—*2dly*, because the child, from the conscious activity of his mind, is aware of the successful result of his labours, and therefore cheerfully strives to overcome difficulties, from the certainty of meeting his reward in the accomplishment of his object.

After receiving *two* lessons in reading, the learner, rather too soon perhaps, is taught to write, as follows:—

‘ Instead of commencing with elementary lines, curves, and letters, in what is called text-hand, a complete sentence, written by the master or engraved, in *small-hand*\*, is put before his eyes, which he is directed to copy. For obvious reasons, this sentence is generally the same as that from which he received his first notions of reading. The two pursuits are thus made mutually to assist each other, and the pupil very soon learns, by himself, to distinguish between the printed characters and those employed in writing. He writes, as well as he can, the first word “The,” and no further progress must be made, till, by an attentive comparison of his own performance with the original copy, he becomes conscious of the faults and defects of the former.

‘ The questions referred to as necessary to be put to the pupil are of a similar character and tendency to the following:—Pointing to the first letter of the pupil’s attempt, and directing him to look carefully both at it and at the copy, the teacher says,—

‘ Q. Is this *J* well made?

\* There seems to be no sufficient reason for preferring a cramped small-hand to a good round-text. Why should difficulties be increased? and, besides, it seems unlikely that children would learn the forms of the letters as easily from a small-hand as from one of a larger size, which allows greater freedom for the use of the fingers.

'A. No ; it is too high, or too short, or too long, &c.

'Q. Could it be made better ?

'A. I think so.

'Q. What must you do then to improve it ?

'A. Make it longer, or shorter, or broader, &c.

'Q. How could you have made it better at first ?

'A. By paying more attention.

'These questions, it is easily seen, may be indefinitely varied and extended, according to circumstances ; but the principle must never be lost sight of, that *the pupil always corrects himself*. Each letter passes under a similar review, and the whole word is then written over again, the second and each successive attempt being subjected to the same rigid investigation, until the pupil learns to correct, in a greater or less degree, every fault, as previously particularized by himself. He then goes on to the second word, in examining which, the process just described is invariably employed, and so on with regard to the rest of the sentence, recollecting, that every time a fresh word is taken, the writing must commence with the first word written, that all the results of the attention previously bestowed may be embraced and preserved each time of transcription, and that the pupil may not fall again into any of the errors of which he has already been made conscious. When the child begins to transcribe a sentence or two tolerably well, he is required to write from memory, and afterwards note his faults by comparison with the original copy.'—pp. 14, 15.

Thus far there seems to be little to disapprove in M. Jacotot's method, but, on the contrary, much that deserves commendation, as being natural and likely to please and interest those for whose use it is intended. The old way of teaching to read and write is execrable, and it would be well if the plan here described could be introduced in its place.

The child having been thus easily taught to read and write is next required to apply this knowledge to some useful purpose, as for instance, learning his mother-tongue. As the plan here adopted is similar to that employed in teaching languages in general, a description of it will serve for all. Still the principle announced at the commencement, 'Learn something thoroughly,' &c., is fully carried into practice.

'To adapt it to the study of all languages, whether the vernacular or others, it is made to assume the following form :—*Learn one book in the language (whatever this may be) thoroughly, refer all the rest to it by your own reflection, and verify the observations of others by what you know yourself*. He who obeys this direction, acquires languages in about one-tenth of the time usually employed to arrive at the same result.'—p. 17.

It is by the *matter* of a language first, and subsequently by

a careful *generalization founded on this matter*, that the Jacotot student acquires his knowledge of it.

' Grammar, instead of being introduced to the pupil's attention as soon as he can read, is postponed to a very late stage in his literary education. He writes themes, moral and physical essays, criticisms, &c. &c., and, in short, goes through an entire course of elementary composition, before he is required to investigate the principles of grammar.'—p. 17.

And again—

' Instead of learning rules, in order to apply facts to them, the pupils of Jacotot are directed to learn the facts themselves, and afterwards to verify the rules or observations of the grammarians by their own knowledge. They are, indeed, sent (to use the author's expression) *to the masters of the grammarians*, that is, to the standard classical writers of the language.'—p. 19.

So far as respects the principle it will be thought to be just and philosophical. We are not convinced, however, of the judiciousness of the following remark (Mr. Payne's):—' that the real importance of grammatical knowledge in the business of education is by no means commensurate with that factitious estimation in which it has long been held.' A complete knowledge of the grammar is one of the last stages in learning a language, and it should be so; but yet it is a kind of knowledge not a whit less important than any that precedes it. It is that which cements and strengthens the parts of the whole, and proves its stability, beauty, and symmetry; and no one can be reckoned to have gained a sufficient, correct, and critical knowledge of any language whatever, until he has generalized its particulars, and formed in his own mind both the principles and details of the grammar.

M. Jacotot is said to proceed as follows:

' The pupil is required to commit to memory the first six books of Telemachus, as an introductory exercise. These he must know perfectly, so as to be able to repeat them from one end to the other without the slightest hesitation; and whenever the teacher mentions the first word of a paragraph or sentence, to continue the paragraph or sentence without the omission of a single word. Many persons to whom this has been mentioned have been at once startled at what they considered so vast a requirement, not recollecting, at the same time, that much more, and (as will be shown) to infinitely less purpose, is exacted from the pupil by the common method.'—p. 20.

It is indeed rather startling to hear of the great advocate for *Intellectual Emancipation* proposing to load the memory with six books of Fenelon's *Telemachus*, or an equal quan-

tity of any work whatever, not one word of which is necessarily supposed to be understood by the unfortunate learner. Well, indeed, may such an exercise be found ‘ tedious and wearisome,’ and such as ‘ to require great care on the part of the teacher to prevent it from becoming repulsive and disgusting to the pupil.’ Is it possible that such a proposition could have been made by any one who has studied the constitution of the human mind as M. Jacotot professes to have done? Mr. Payne, it is justice to state, has the good sense to see in part the absurdity of the plan here laid down, and he suggests a remedy; but none, we apprehend, can be applied in the case of a dead language, without sacrificing one of Jacotot’s leading principles, which forbids all explication whatever on the teacher’s part. The task, however, with all its difficulties, somehow or other is learnt (at least so we are told), little being exacted at first, gradually more and more, until the pupil’s memory, by dint of severe exercise, is enabled to retain more readily and permanently. This spiritless task over, the child’s labour, we are told, is almost all past (it were well indeed if it were, considering what he has passed)—although, forsooth, he knows not one single word of the meaning of the language which he is engaged in learning. To proceed—

‘ Every exercise afterwards required of him is little better than amusement; he is in possession of all the necessary materials, and his mind will almost spontaneously employ them. In his book, he finds the elements of Grammar, Composition, Criticism, Mental and Moral Philosophy, Logic, the Science of Human Nature in general, History, Geography, Science, &c. &c., of everything, indeed, that the author deemed it necessary for himself to know, in order to produce his work as it actually exists. He is in thorough possession of the unembodied essence of all the subjects of knowledge just mentioned, though he is not made to stumble and start at their technical nomenclature. Nothing remains but to evolve the various elements, and they are then seen to assume the form and character of distinct sciences. But this is not all: from particular facts, and the particular reflections connected with them, the pupil’s mind is led on to analyse circumstances in the aggregate,—to generalise,—to trace the method pervading the whole,—to see the reason of that method,—and thus to enter into the very spirit of his author, and to understand everything, to think upon everything, as the author did while composing his work.’—  
pp. 20, 21.

This may be regarded as the explication of Jacotot’s dictum, ‘ *Tout est en tout.*’ Little more is meant, we apprehend, than that everything is *to be learnt thoroughly*, and all possible use made of facts already *known*, in order that

they may be used as paths to lead the learner to regions *unknown*, and still to be explored. The spirit of the maxim, as it is explained at present, was acted upon by Pestalozzi, who was the first to introduce into school education the very philosophical plan of *development*.\* This plan of learning facts in a factitious connexion with certain other facts committed to memory, may be good to a certain extent; but the pursuit of the principle to its farthest possible extreme will not, it is feared, in reality be attended by all the benefit anticipated by the Jacototians. We do not allow that the *seeds* of the different sciences may be found in the contents of any classical work, such as Fenelon's 'Telemachus,' or Johnson's 'Rasselas'; and if the seeds were there, we believe no crop of sound and useful knowledge will be gained by the pupil who is to till in these fields alone.

It will be well to let some few of Mr. Payne's practical illustrations have a place here, in order that the reader may have some idea of the manner in which his principles are applied. Repeated interrogation is used to *unfold* the pupil's knowledge. Employing again the translation of 'Telemachus,' and—

' Taking the first sentence—

" The grief of Calypso for the departure of Ulysses would admit of no comfort"—

The teacher asks—Who was gone ?

The pupil answers—Ulysses.

*Q.* Who was grieved ?

*A.* Calypso.

*Q.* What was the cause of Calypso's grief ?

*A.* The departure of Ulysses.

*Q.* Did Calypso love Ulysses ?

*A.* Yes.

*Q.* How do you know that ?

*A.* Because her grief for his departure would admit of no comfort.

*Q.* Was she slightly grieved, or very much ?

*A.* Very much.

*Q.* What do we call that grief which admits of no comfort ?

*A.* Inconsolable.'—pp. 29, 30.

' The mind is to be *directed*, not *taught*. It is to be placed so that it may see the subject in every possible point of view, and the interrogation must be continued, until the entire scene, the actors, the action performed, the cause and object of the action, the

\* To those who are unacquainted with Pestalozzi's views on education, it may be necessary to explain, that he looks upon the child as possessing a mind endued with faculties capable of exertion, and containing, as it were, within itself, by reason of its active principle, the rudiments of knowledge. These rudiments it is the teacher's work to develop, not by explaining to the *passive* mind, but by leading it to *unfold itself*, and *display* its hidden powers.

modifying circumstances, &c. &c. are all distinctly in view. Not a word must be neglected. This comprehends the *learning thoroughly*; and the practice of *referring everything to the first thing learned*, can, as will be seen directly, even at this initiatory stage, be brought into operation. The next sentence is read:

"In the height of her sorrow, she even regretted her immortality."

- Q.* To whose sorrow is reference here made?
- A.* To that of Calypso.
- Q.* Who was immortal?
- A.* Calypso.
- Q.* Why did she regret her immortality?
- A.* Because Ulysses was gone, and in her sorrow she would have wished to die.
- Q.* Why wish to die?
- A.* That she might lose her sorrow.
- Q.* Why could she not die?
- A.* Because she was immortal.
- Q.* What is it then to be immortal?
- A.* Not to be able to die.
- Q.* What do we know of Calypso from this sentence?
- A.* That she was sorrowful and immortal.
- Q.* Did we know these circumstances from the first sentence?
- A.* No; only one of them, that she was sorrowful.
- Q.* What more then do we now see?
- A.* That she was immortal.'—pp. 30, 31.

This process is continued through the whole series of instruction; and thus, as Mr. Payne observes,

'The pupil in this way becomes well acquainted with each word, phrase, paragraph, several paragraphs united, and, in short, with an entire book. As the exercise is continued, and the pupil accustomed to answer, his progress becomes more and more interesting. Every new character, every new fact or group of facts, must be compared with those that have preceded.'—p. 35.

When the pupil possesses a perfect knowledge of the ideas contained in his text-book, he is led to generalize and to express the results in writing. Thus he is taught to write descriptive pieces, moral essays, &c. &c., all grounded on the knowledge gained from the study of his model; and then required to justify, or prove the correctness of his statements, by comparing them with those in the original. It may be reasonably doubted, whether much *real* benefit can result to the pupil from stringing together in a connected *moral essay*, sentences, phrases, and words, which often, with little relation to the subject, occur in his reading; at best this is nothing more than a bad way of teaching what is called *composition*.

Jacotot's course, based entirely on an acquaintance with a

certain quantity of some good work, comprehends twenty kinds of exercises : 1. 'To imitate,' i. e., to apply similar sentiments to different circumstances ; 2. 'To make general reflections upon known facts,' which is a more advanced process of generalization ; 3. and 4. 'To distinguish the nice shades of distinction observable between words and phrases generally accounted synonymous :—

- ‘ 5. To examine parallel subjects.
- 6. To examine analogous thoughts.
- 7. To transfer or translate the reflections arising from one subject to another somewhat similar.
- 8. To analyze a chapter, book, poem, &c.
- 9. To develop or paraphrase the thoughts of an author.
- 10. To find subjects for transference.
- 11. To write upon a literary or critical subject ; to furnish descriptions of things observed.
- 12. To imitate a thought.
- 13. To write letters.
- 14. To pourtray a character.
- 15. To compare characters.
- 16. To write tales, sketches, &c.
- 17. To verify the grammar.
- 18. To write upon any given subject in a given time.
- 19. To speak extemporaneously upon a given subject.
- 20. All is in all.’—p. 39.

To understand all these exercises, the reader must study Mr. Payne's book ; and it will be well if a thorough understanding of their meaning is gained thereby.

We have thus, as briefly as possible, and it is to be feared but imperfectly, given an account of Jacotot's system as explained by Mr. Payne. There are many good points in it, and his leading principle, ‘ Learn something,’ &c., as a *general* maxim, is correct and useful. To strain a principle, however, and to apply it universally, even where it is not applicable, is injudicious ; and this has been done by Jacotot. His views respecting the teaching of languages, seem to be exceedingly unsound. The adoption of them is likely, as we think, not only to damp the power of imagination, but to destroy all originality of thought, by making the students' compositions not the expressions of their own minds so much as a copy or transcript of the sentiments of the writer whom he has been studying. It is also one of M. Jacotot's principles to teach all languages by the same medium, i. e., by using the same work with translations of it, for the purpose, it is said of facilitating the comparison of idioms, &c. Expediency cannot justify a decided error

in principle, as we believe this to be, though we readily allow that many good teachers are of a different opinion. It will, however, be acknowledged, in general, by those who are competent to judge of the matter, that no translation can be made of any piece of composition from one language into another, at the same time *perfectly* conveying the ideas of the original, and bearing the characteristics of ease and nature which are essential to good writing in any language, and yet, at the same time, not greatly departing from the form and idiom in which the ideas to be translated were originally expressed. Hence we look upon the plan proposed as exceedingly injurious,—likely to give persons very wrong impressions on the subject of languages, and to impart to them much which they must necessarily unlearn before they can acquire any just notions, any real knowledge. In respect of the dead languages,—and M. Jacotot applies his principle equally to these as to the living,—the notion is too absurd to require refuting. What is the result of the application of his method to these languages? Out of a great number of compositions which we have *seen* (some of which the reader may examine for himself in an account of Jacotot's method by Mr. Cornelius,—particularly two,—one Latin on the influence of classical studies on morality,—another Greek—a most *tasteless* eulogium on Jacotot) there is not one that rises above mediocrity;—in general they are far below it:—some are ridiculous. The Greek specimen given by Mr. Cornelius, p. 65, has the following certificate attached to it: ‘*Agé de 13½ ans. Trois mois d'étude.*’ It is certainly something very much more than would be produced after three months' study in the usual way, but we do not on this account set a high value on it. It is evidently composed of scraps learned by heart and put together with very little knowledge of the language. The most ludicrous blunders are found in nearly every line, such as *οἱ γιγνοσκότες ἡαυτοῦ* for *οἱ γιγνωσκότες αὐτοῦ*, *ἐπαιδεύσονται* for *ἐπαιδευσεναι*, and *γαρ δει* for *δει γαρ*, &c. Half of it is nearly unintelligible. We think it necessary to protest specially against this piece of Greek, because it is that kind of thing which is likely to deceive parents who are not competent to judge. The permanency of the impression made, is said to be one striking advantage of the Jacotot system: if Greek like this is permanently fixed in a lad's mind, it is a complete bar to the acquisition of the language.

In conclusion, we are of opinion that there are some points of great merit in the method of universal instruction,—particularly as respects reading and writing, and also *some* parts of the plan pursued by Jacotot in teaching languages,

As a whole, however, we do not approve of the system. M. Jacotot may, as he does, put forth his opinions with positiveness; but it is for those who read them, and with an *impartial* eye see them reduced to practice, to judge of their correctness and practical utility. It is to be hoped that teachers will maturely weigh the merits and demerits of *every part* of the system, before they introduce it in its entire form to the pupils, and not too soon be charmed by its novelty and plausibility to rest upon it all the future instructions which they impart.

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#### MEMOIRS OF OBERLIN.

*Memoirs of John Frederic Oberlin, Pastor of Waldbach, in the Ban de la Roche.* Compiled from authentic sources, chiefly in French and German. Second Edition. 1830.

THE Ban de la Roche (in German the Steinthal), forms a part of a range of mountains known as the Haut Champ, or Champ de Feu, which are detached by a deep valley from the eastern boundary of the chain of the Vosges. Nature has not been lavish of her gifts to this isolated canton. Its German name, which signifies the Valley of Stone, is expressive of its native barrenness. Its winter commences in September, and the snow remains undissolved till the following May. In the more elevated parts of the district, the people say that the wife can carry home in her apron all the hay which her husband has mown in a long morning. To fill up the measure of wretchedness for the few inhabitants of the canton, it was laid waste during the Thirty years' war, and again, after a short breathing-time, in the reign of Louis XIV. Thus, in the middle of the last century, the nine thousand acres of which the Ban de la Roche consisted did not afford subsistence to a hundred families, and these were destitute of all the comforts of civilized life. But, miserable as these people were, they retained a blessing which, if not in itself a compensation for the sterility of their soil, the curse which war had brought upon them, and the neglect of their government, was the germ at least of eventual prosperity and happiness. They had, in common with the rest of Alsace, liberty of conscience. The decree which incorporated that province with France, secured to them this inestimable good. Religious persecution, therefore, never entered these secluded valleys, to destroy the last hope which was left amidst abject poverty and ignorance. The people of the Ban de la Roche, who were Lutherans, followed their own worship unmolested, whilst the Protestants of Languedoc, and other parts of France, endured the most disgraceful oppression. It was

this freedom which at last gave them knowledge, and all the blessings which follow in its train, by bestowing upon them a pastor who, whilst he never lost sight of his peculiar duties as a minister of religion, knew that God would not be worshipped with less zeal and sincerity by an instructed than by an ignorant population, and that the spiritual condition of his flock would in no degree be deteriorated if their outward circumstances could at the same time be improved. That pastor was Oberlin, whose interesting memoirs we here notice, principally to show how much the systematic energy of one man may accomplish in advancing the work of education, and how speedily and surely the most benighted ignorance of an agricultural population may be superseded by an active and comprehensive intelligence, if the people are taught the value of knowledge by practical appeals to its certain influence upon their own condition.

The Ban de la Roche has been singularly fortunate in having had the work of general education carried forward with zeal and discretion by the religious instructors of its population, from the year 1750 to the death of Oberlin in 1827. The predecessor of Oberlin was M. Stouber, a man of a less ardent temperament, but who, like himself, had the remarkable merit of perceiving the necessity of instructing the great body of the people, undeterred by those vain fears, and uninfluenced by those obstinate prejudices, which, in nations calling themselves enlightened, have so long opposed the progress of knowledge, upon the principle that popular ignorance and state security are inseparable. M. Stouber began his pastoral office by reforming the village schools. The principal establishment for the elementary instruction of the district was a miserable cottage, where a number of children were crowded together, wild and noisy, and without occupation. The schoolmaster, a withered old man, lay on a little bed, in one corner of the room. The dialogue between Stouber and this functionary is amusing :—

‘ What do you teach the children ?

Nothing, Sir.

Nothing ! how is that ?

Because I know nothing myself.

Why, then, were you instituted schoolmaster ?

Why, Sir, I had been taking care of the Waldbach pigs for a great number of years, and when I got too old and infirm for that employment, they sent me here to take care of the children.’

We are by no means sure that the ancient race of parish schoolmasters, of which he of Waldbach was not an unfavourable specimen, (for his candour, if not his learning, deserve our commendation), is quite extinct even in our own

country. Unlike some of the authorities amongst ourselves, who preside over the mysteries of village instruction, dispensing the smallest possible quantity of knowledge, and that of the worst quality, with as rigid an economy as that which regulates the distribution of a mountebank's prizes, Stouber thought that the poverty of the schoolmaster was not the only qualification for the business of teaching. He set about procuring new schoolmasters; but the trade was considered so disreputable, that none of the more respectable inhabitants of the canton would undertake the office. Stouber, like a wise man, changed the title of the vocation; and though he could not obtain schoolmasters, he had no difficulty in finding superintendents for his schools under the dignified name of 'Messieurs les Régents.' These worthy men were soon in full activity. Stouber printed spelling-books and reading lessons for the use of his pupils, and built a log-hut for a school-house. The progress made by the children induced their parents to wish to read, and a system of adult instruction, during part of the Sunday, and in the long winter evenings, was established throughout the canton. In addition, he gave the people bibles, which they had never before seen, or even heard read, for their former minister had not possessed a copy himself. Stouber persevered in his admirable labours for fourteen years, when, his wife dying, his situation lost a principal charm, and he accepted the station of pastor to St. Thomas's Church, at Strasbourg. He found a successor in Oberlin (a native of Strasbourg, and brother of the celebrated Professor), who had been educated for the ministry, and who was ardently looking for some cure in which his pious zeal might be fitly exercised. He entered upon his charge in 1767, in the twenty-seventh year of his age.

Oberlin's situation was a singular one, and to some minds it would have been sufficiently discouraging. He was of an enthusiastic nature, devoted to his profession, ardent in the attainment of knowledge, and anxiously desirous to communicate it to others. The people amongst whom he was thrown were still lamentably ignorant, and obstinately prejudiced against any attempts to improve them which should require a deviation from their old habits. They suffered Stouber to teach their children to read, because the schoolmaster was an ancient officer amongst them; but Oberlin's notions of education were much too comprehensive for their understandings. He found them speaking a rude *patois*, which as effectually separated them from communication with the rest of mankind as their utter want of roads; the husbandmen were destitute of the commonest implements, and had no means of procuring them; they had no knowledge of agri-

culture beyond the routine practices of their forefathers ; they were ground down and irritated by a hateful feudal service. He devoted himself to the correction of these evils, at the same time that he laboured in his spiritual vocation. The people at first did not comprehend his plans or appreciate his motives. Ignorance is always suspicious. They resolved, with the dogged pertinacity with which the uneducated of all ranks cling to the rubbish of old customs, not to submit to innovation. The peasants agreed on one occasion to waylay and beat him, and on another to duck him in a cistern. He boldly confronted them, and subdued their hearts by his courageous mildness. But he did more : he gave up *exhorting* the people to pursue their real interests ; he practically showed them the vast benefits which competent knowledge and well-directed industry would procure for them. These mountaineers in many respects were barbarians ; and he resolved to civilize them, as all savages are civilized, by bringing them into contact with more enlightened communities. The Ban de la Roche had no roads. The few passes in the mountains were constantly broken up by the torrents, or obstructed by the loosened earth which fell from the overhanging rocks. The river Bruche, which flows through the canton, had no bridge but one of stepping-stones. Within a few miles of this isolated district was Strasbourg, abounding in wealth and knowledge and all the refinements of civilization. He determined to open a regular communication between the Ban de la Roche and that city ; to find there a market for the produce of his own district, and to bring thence in exchange new comforts and new means of improvement. He assembled the people, explained his objects, and proposed that they should blast the rocks to make a wall, a mile and a half in length, to support a road by the side of the river, over which a bridge must also be made. The peasants one and all declared the thing was impossible ; and every one excused himself from engaging in such an unreasonable scheme. Oberlin exhorted them, reasoned with them, appealed to them as husbands and fathers — but in vain. He at last threw a pickaxe upon his shoulder, and went to work himself, assisted by a trusty servant. He had soon the support of fellow-labourers. He regarded not the thorns by which his hands were torn, nor the loose stones which fell from the rocks and bruised them. His heart was in the work, and no difficulty could stop him. He devoted his own little property to the undertaking ; he raised subscriptions amongst his old friends ; tools were bought for all who were willing to use them. On the

Sunday the good pastor laboured in his calling as a teacher of sacred truths ; but on the Monday he rose with the sun to his work of practical benevolence, and, marching at the head of two hundred of his flock, went with renewed vigour to his conquest over the natural obstacles to the civilization of the district. In three years the road was finished, the bridge was built, and the communication with Strasbourg was established. The ordinary results of intercourse between a poor and a wealthy, a rude and an intelligent community, were soon felt. The people of the Ban de la Roche obtained tools, and Oberlin taught their young men the necessity of learning other trades besides that of cultivating the earth. He apprenticed the boys to carpenters, masons, glaziers, blacksmiths, and cartwrights, at Strasbourg. In a few years these arts, which were wholly unknown to the district, began to flourish. The tools were kept in good order, wheel-carriages became common, the wretched cabins were converted into snug cottages ; the people felt the value of these great changes, and they began to regard their pastor with unbounded reverence.

Oberlin, however, had still some prejudices to encounter in carrying forward the education of this rude population. He desired to teach them better modes of cultivating their sterile soil ; but they would not listen to him. ‘ What,’ said they, with the common prejudice of all agricultural people in secluded districts, ‘ what could he know of crops, who had been bred in a town.’ It was useless to reason with them ; he instructed them by example. He had two large gardens near his parsonage, crossed by footpaths. The soil was exceedingly poor ; but he trenched and manured the ground, with a thorough knowledge of what he was about, and planted it with fruit trees. The trees flourished, to the great astonishment of the peasants ; and they at length entreated their pastor to tell them his secret. He explained his system, and gave them slips out of his nursery. Planting and grafting soon became the taste of the district, and in a few years the bare and desolate cottages were surrounded by smiling orchards. The potatoes of the canton, the chief food of the people, had so degenerated, that the fields yielded the most scanty produce. The peasants maintained that the ground was in fault ; Oberlin, on the contrary, procured new seed. The soil of the mountains was really peculiarly favourable to the cultivation of this root, and the good minister’s crop, of course, succeeded. The force of example was again felt, and abundance of potatoes soon returned to the canton. In like manner, Oberlin intro-

duced the culture of Dutch clover and flax ; and at length overcame the most obstinate prejudice, in converting unprofitable pastures into arable land. Like all agricultural improvers, he taught the people the value of manure and the best modes of reducing every substance into useful compost. The maxim which he incessantly repeated was, ‘ let nothing be lost.’ He established an agricultural society, and founded prizes for the most skilful farmers. In ten years from his acceptance of the pastoral office in the Ban de la Roche, he had opened communications between each of the five parishes of the canton and with Strasbourg, introduced some of the most useful arts into a district where they had been utterly neglected, and raised the agriculture of these poor mountaineers from a barbarous tradition into a practical science. Such were some of the effects of education in the most comprehensive sense of the word.

The instruction which Oberlin afforded to the adults of his canton was only just as much as was necessary to remove the most pressing evils of their outward condition, and to impress them with a deep sense of religious obligation. But his education of the young had a wider range. When he entered on his ministry, the hut which his predecessor had built was the only school-house of the five villages composing the canton. It had been constructed of unseasoned logs, and was soon in a ruinous condition. The people, however, would not hear of a new building ;—the log-house had answered very well, and was good enough for their time. Oberlin was not to be so deterred from the pursuit of his benevolent wishes. He applied to his friends at Strasbourg, and took upon himself a heavy pecuniary responsibility. A new building was soon completed at Waldbach, and in a few years the inhabitants in the other four parishes came voluntarily forward, to build a school-house in each of the villages. Oberlin engaged zealously in the preparation of masters for these establishments, which were to receive all the children of the district when of a proper age. But he also carried the principle of education farther than it had ever before gone in any country. He was the founder of *Infant Schools*. He saw that almost from the cradle children were capable of instruction ; that evil habits began much earlier than the world had been accustomed to believe ; and that the facility with which mature education might be conducted, greatly depended upon the impressions which the reason and the imagination of infants might receive. He appointed *conductrices* in each commune, paid at his own expense ; and established rooms, where children from two to six years old

might be instructed and amused :—and he thus gave the model of those beautiful institutions which have first shewn us how the happiness of a child may be associated with its improvement, and how knowledge, and the discipline which leads to knowledge, are not, necessarily

‘ Harsh and crabbed as dull fools suppose.’

The children, in these little establishments, were not kept ‘ from morn till noon, from noon to dewy eve’ over the horn-book and primer. They learnt to knit, and sew, and spin; and when they were weary, they had pictures to look at, and maps, engraved on wood, for their special use, of their own canton, of Alsace, of France, and of Europe. They sang songs and hymns ;—and they were never suffered to speak a word of *patois*. This last regulation shews the practical wisdom of their instructor. There are parts of the United Kingdom which will always fall short of the general civilization ; as long as languages which have no literature continue to be spoken there. The Welch, and Irish, and Gaelic, however venerable in the eyes of antiquaries, are effectual obstacles to the civilization of the districts from which they are not yet rooted out.

When the children of the Ban de la Roche—the children of peasants, be it remembered, who a few years before the blessing of such a pastor as Oberlin was bestowed upon them, were not only steeped

‘ Up to the very lips in poverty,’

but were groping in that darkness of the understanding which too often accompanies extreme indigence—when these children were removed to the higher schools, which possessed the most limited funds when compared with almost the meanest of our parochial endowments for education, they were taught reading, writing, arithmetic, geography, astronomy, sacred and profane history, agriculture, natural history especially botany, natural philosophy, music, and drawing. Oberlin reserved for himself, almost exclusively, the religious instruction of this large family ;—and he established a weekly meeting of all the scholars at Waldbach. The inhabitants of Strasbourg and of the neighbouring towns from which the Ban de la Roche had been recently cut off, came to look upon the wonders which one man had effected. Subscriptions poured in upon the disinterested pastor ;—endowments were added. Well did he use this assistance. He founded a valuable library for the use of the children ; he printed a number of the best school-books for their particular instruction ; he made a collection of philosophical and mathematical instru-

ments ; he established prizes for masters and scholars ; he published an almanack, which he gave to his people, in the preface to which is the following passage :—

‘ In your common almanacks you find, and pay for, a number of incomprehensible things ; for others absolutely useless ; and for others contrary to the commands of God,—such as prognostics of the weather, nativities, predictions from the planets according to birth-days, lucky and unlucky days, or good or bad omens. This new almanack is divested of such nonsense.’

Thus did this extraordinary man strive to raise the intellectual standard of his parishioners, whilst he laboured to preserve the purity of their morals and the strength of their piety. Never did religion present more attractive features than in the secluded districts of the Ban de la Roche. The love of God was constantly inculcated as a rule of life ; but the principle was enforced with no ascetic desire to separate it from the usefulness and the enjoyment of existence. The studies in which these poor children were trained contributed as much to their happiness as to their knowledge. They were not confined for years, as are the boys and girls of our parish schools, to copying large text and small hand, to learning by rote the one spelling-book, to hammering at the four rules of arithmetic without understanding their principles or their more practical applications, to repeating the catechism, and to reading the Pentateuch\*. The principle which unhappily determines the course of too many of our parochial schools, is a fear that the children of the working classes should be over-educated—a grovelling and ignorant fear. The children of Oberlin’s schools were taught whatever could be useful to them in their pastoral and agricultural life, and whatever could enable them to extract happiness out of their ordinary pursuits. They were incited to compose short essays on the management of the farm and the orchard ; they were led into the woods to search for indigenous plants, to acquire their names, and to cultivate them in their own little gardens ; they were instructed in the delightful art of copying these flowers from nature ; it was impressed upon their minds that as they lived in a district separated by mountains from the rest of mankind, and moreover a district naturally sterile, it was their peculiar duty to contribute

\* The reading of the Bible in the classes of many parish schools is conducted, not with reference to the connexion of the Old with the New Testament, but upon the established principle of beginning at the beginning, and continuing right onwards ; so that after a child has waded through all the Levitical law, and one or two of the historical books, the remainder of the volume is left to the chance perusal of his maturer years.

something towards the general prosperity ; and thus, previously to receiving religious confirmation, Oberlin required a certificate that the young person had planted two trees. Trees were to be planted, roads were to be put into good condition, and ornamented, to please Him ' who rejoices when we labour for the public good.' Surely a community thus trained to acquire substantial knowledge, equally conducive to individual happiness and general utility, were likely to become virtuous and orderly members of society, contented in their stations, respectful to their superiors, kind to each other, hospitable to the stranger, tolerant to those who differed from them in opinion. Oberlin lived long enough to see that such conduct was the real result of his wise and benevolent system. Let those who are afraid of overteaching the poor, see what sort of men and women were formed by their kind minister, out of the boys and girls of the Ban de la Roche.

In 1784, Oberlin lost his excellent wife. There was a servant in his family, an orphan named Louisa Schepler, who had been brought up in his schools, and was afterwards one of the *conductrices* of the infant establishments. After being the nurse of Oberlin's children for nine years following the death of their mother, this poor girl wrote to her master, her *cher papa*, to beg that she might be allowed to serve him without wages.

' Do not, I entreat you,' she says, ' give me any more wages ; for as you treat me like your child in every other respect, I earnestly wish you to do so in this particular also. Little is needful for the support of my body. My shoes, and stockings, and *sabots* will cost something, but when I want them I can ask you for them, as a child applies to its father.'

The enemies of education used to maintain that the instruction of the poor would put an end to the race of faithful servants. Let Louisa Schepler answer them !

In the course of twenty years the population of the Ban de la Roche had increased to six times the number that Oberlin found them when he entered upon his charge. The knowledge which their pastor gave to the people gave them also the means of living, and the increase of their means increased their numbers. The good minister found employment for all. In addition to their agricultural pursuits, he taught the people straw-plaiting, knitting, and dyeing with the plants of the country. In the course of years Mr. Legrand, of Basle, a wealthy and philanthropic manufacturer, who had been a director of the Helvetic republic, introduced the weaving of silk ribbons into the district.

'Conducted by Providence,' says this gentleman, 'into this remote valley, I was the more struck with the sterility of its soil, its straw-thatched cottages, the apparent poverty of its inhabitants, and the simplicity of their fare (chiefly consisting of potatoes), from the contrast which these external appearances formed to the cultivated conversation which I enjoyed with almost every individual I met whilst traversing its five villages, and the frankness and *naïveté* of the children, who extended to me their little hands.'

. . . . It is now four years since I removed here with my family; and the pleasure of residing in the midst of a people whose manners are softened, and whose minds are enlightened by the instructions which they receive from their earliest infancy, more than reconciles us to the privations which we must necessarily experience, in a valley separated from the rest of the world by a chain of surrounding mountains.'

Let Mr. Legrand reply to those who affirm that an educated peasantry would become discontented with their lot, and therefore troublesome and impertinent neighbours to the more wealthy inhabitants who reside amongst them!

The people of the Ban de la Roche for eighty years had been in dispute with the *seigneurs* about the rights of forest to which each party laid claim. This dispute was carried on, sometimes with furious violence, but habitually with expensive litigation. In 1813, Oberlin persuaded his flock to come to an accommodation, which should at the same time have respect to the claims of the owners, and secure a due portion of their own proper privileges. He convinced them that this ruinous contest was the scourge of the country, and that it was the duty of all men to live in peace. The parties agreed to an accommodation advantageous to both sides; and the pen with which the deed of pacification was signed was solemnly presented to him by the mayors of the canton. It was for that pen to record, as clearly as facts can speak, that an educated people are the truest respecters of the rights of property! Without an acquaintance with their political duties (that part of education which is the most fearfully neglected amongst ourselves), Oberlin could never have convinced those peasants that any portion of the claims of the *seigneur* were founded in justice and the common good.

There is a prevailing opinion that the virtues of hospitality and of self-denying charity belong, almost exclusively, to uncultivated minds; and we are taught to look for their perfection in the dirt of a Highland cabin or of an Irish hovel. An English visitor of the Ban de la Roche says,

'If you go into a cottage they quite expect you will eat and drink with them; a clean cloth is laid upon a table, and the new milk and

the wine, and the great loaf of bread, are brought out; yet they are in reality exceedingly poor.'

The authoress of the 'Memoirs' says,

'When a poor father or mother died, leaving a numerous family, it was a thing of course for some poor person to offer to take upon himself the charge and care of the orphans, so that many of the households contained one or two of these adopted children, and they seldom thought of mentioning that they were not their own.'

Let those who maintain that what we gain in knowledge we lose in feeling, take a lesson from the foster-fathers of the Ban de la Roche!

If the example of Oberlin be worth anything, it ought not to be without its influence upon the landed proprietors, and more especially upon the clergy, of our own country. Let us look to Ireland, the opprobrium of our civilization. Blessed with a fertile soil and a genial climate, surrounded by all the attributes of wealth and refinement, in communication with the most industrious and intelligent people of the earth, Ireland is cursed with poverty, ignorance, idleness, anarchy, intolerance, and every other evil that denotes a low standard of morals and knowledge. Is this condition past remedy? We think it is not; for the evil may be diminished, if it cannot be entirely removed. An example is on record.

The district of Glenbegh, on the banks of the bay of Castlemain, in the county of Kerry, was, twenty years ago, inhabited by as rude a population as could be exhibited even in Ireland. This estate, consisting of about 15,000 acres, is the property of Lord Headley. It yielded scarcely anything to its proprietor; it was an asylum for criminals, not previous to a king's writ or a magistrate's warrant; the people on the coast were all wreckers; they lived in hovels without windows or chimneys; they were constantly quarrelling; they had no shoes or stockings; the district was almost wholly without roads, and not a wheel-carriage was employed in the agricultural operations of the interior. In 1830, the people were well-clothed; the houses were built of stone, with windows and chimneys, the old cabins being converted into cow-sheds; the agriculture was superior to the best cultivated of the neighbouring districts; roads were established, and wheel-carriages were commonly used. How was this great change effected? The agent of Lord Headley will tell us:

'The means adopted were, generally, an attention to the character of the people, and a constant desire on the part of the ma-

nagers of the estate, to avail themselves of the disposition of these people to the improvement of the lands, and to the improvement of their habits and character; it was done with very little sacrifice of rent or of money, but a constant and earnest attention to the object of improving the estate by the industry of the people.\*

Schools were established in Glenbegh; but the labour which they were free to pursue was so profitable, that the children deserted their instructors to go to work. Had Oberlin been there, this matter would have been better regulated. The people were, however, anxious for education; and they gave the agent a list of books which they desired to have, amongst which was the 'Spectator.'

But let us not deceive ourselves by imagining that Ireland alone, of the United Kingdom, requires such a sound and comprehensive system of education as the pastor of Waldbach bestowed upon his poor parishioners. The ignorance of the agricultural districts of England is too appalling to be any longer concealed. It has spoken with a voice of terror to those who lulled themselves into a shameless neglect of their duty, by the miserable belief that in the intellectual darkness of the labourers consisted their own security from *servile* violence. Is it not monstrous, in a country which possesses endowed schools in every town, which has National schools, and Lancasterian schools, and Sunday schools in every village, and, above all, which has five thousand beneficed clergymen distributed over the whole land, that any such state of ignorance should exist as would lead to rick-burning and machine-breaking?

It has been said, and we think justly, that it may be known, from the civil or brutal manners of the people, whether there is a resident clergyman in a parish. But the clergy of England ought not to fancy they have done enough when they have earned this compliment. We are quite ready to acknowledge the influence which the precepts and the example of an educated and conscientious minister of religion must have, in the removal of the grosser indications of extreme ignorance; and we know that those who are content to discharge the honourable office of a parish priest, in the spirit which Herbert described and exemplified, not only remove and mitigate much positive suffering amongst their humble neighbours, but to a certain extent greatly raise the standard of morality and knowledge within the sphere of their vocation. The rich endowments of the church of England seem particularly calculated to enable sincere and zealous clergymen to advance the moral and intellectual

\* Minutes of Evidence on the State of the Poor in Ireland. 1830.  
April, 1831.

condition of the people in their several districts. We admit that much good has been done by some of the wealthy and dignified clergy; the good that still *might be done* is almost incalculable. We speak not this reproachfully; for we believe that many enter the ministry with an ardent determination to do their duty. But their zeal is often checked by the absence of sufficient motive for continuing in a place; and this seems to us one of the great causes of complaint against the national church. Half the English clergy are in the migratory state of curates, and a large number of the beneficed are either non-resident, or have the restlessness of ambition continually disquieting them. How few have the manly zeal to say, as Oberlin said, when a better living was offered him—

‘No—I have been ten years learning every head in my parish, and obtaining an inventory of their moral, intellectual, and domestic wants. I have laid my plan. I must have ten years to carry it into execution, and the ten following to correct their faults and vices.’

Yet every member of the English church, when he becomes an incumbent, has the power to say this. Self-denial, indeed, he must have; but if he has it not, he is unfit to be a preacher of Christianity. The talents which Oberlin possessed, and the energy which he displayed, are by no means uncommon; the direction which he gave to them was the only wonderful part of the matter. Where are the peculiar difficulties which prevent an English clergyman from dedicating himself to the same career as the minister of Waldbach? He is surrounded, it may be said, by dissent, in some of its most intolerant forms. Oberlin presided over a Lutheran community, in the midst of Catholics; but by teaching the people the spirit of religion, and not its unsubstantial dogmas, he compelled those who differed from him to love him, and to love those who followed his precepts. An English gentleman, who was about to visit Oberlin, inquired of his postillion if he knew him. ‘Oh yes,’ was the answer, ‘and have often heard him preach.’

‘Mais vous êtes Catholique, n'est ce pas?’

‘Oui, nous sommes Catholiques, nous autres à Schirmeck; néanmoins, cela ne nous empêche pas d'entendre quelquefois le bon pasteur de Waldbach.’

This is the way in which a good man lives down hostility. But it may be maintained that the extreme ignorance of the people of the Ban de la Roche was an advantage to Oberlin in the prosecution of his plans, and that the half knowledge of the peasantry of England renders them open to corruption

and to evil advisers. The answer is easy. It is in the power of a wise and enthusiastic minister of religion to convert the half knowledge of his parishioners into complete knowledge. We maintain, again and again, that the meanest of all fears is the fear of teaching the working classes too much. Corrupt institutions and ‘unjust stewards’ have alone to dread the progress of intelligence. It is ignorance and not knowledge which at the present moment renders property insecure. Knowledge may be led, ignorance must be driven —as any one who has looked upon the state of the English peasantry, within the last six months, must be abundantly convinced. A few such ministers as Oberlin in every county (and we know that there are such) would sow the seeds of knowledge and virtue among the agricultural population, soon to produce the best harvest. We have drawn this picture of what one right-minded man may accomplish, because we feel satisfied that very many of those who have entered upon the solemn duties of the Christian ministry amongst us are most anxious to employ their talents in advancing the good of mankind. For them is the example of Oberlin valuable. Universally throughout Ireland, in great part of England, but especially in the southern agricultural districts, the work of education requires to be carried forward, not by a parish school here and there, affording only glimpses of knowledge in its most repulsive shape, but largely, liberally, boldly, uncompromisingly. To those, on the other hand, who look to the church only as a nursing mother for their own avarice and ambition (we trust a quickly decreasing race), we shall not attempt to offer the example of the pastor of Waldbach as within the scope of their imitation.

The difficulties which the pastor of Waldbach surmounted should be a lesson of encouragement to every man similarly circumstanced, and especially to the clergy of all denominations. In our own country, too, we have seen ministers devote themselves to their duty with a zeal not less than that of Oberlin, but with success, it is true, often disproportioned to their efforts, owing to circumstances over which they had no controul. In the midst of privation they have been supported by the consciousness of honest intention, and the faithful discharge of their sacred duty. Let the example of Oberlin encourage them in their honorable course. That man had no splendid wages for the Christian office, to pamper him into luxurious indolence and a want of sympathy for those by whom he was surrounded. That man did not shut himself up in his closet throughout the week, to harden his heart and narrow his understanding, by poring

over polemics, which would have been useless to his flock even if they had been intelligible; nor did he foster his pride with *that*, miscalled learning, till his ignorance of things around him was palpable to all except himself. That man did not mix in the angry strifes of political discussion, but even in the heat of the French Revolution proclaimed that ‘ public happiness constitutes private happiness, and that every individual ought, therefore, to live for the public good.’ Oberlin bestowed his time, his talents, his learning, his little property, without stint, upon his flock—we have seen how successfully. He had a reward, which no selfish indolence can approach, and no petty vanity can estimate. In the fulness of his heart, the venerable man, looking round upon the vallies which he had filled with the peacefulness of contented industry, and upon the people whom he had trained to knowledge, and to virtue, the best fruit of knowledge, exclaimed ‘ Yes! I am happy !’ And when he died, he was followed to the grave by an entire population, upon whom he, a poor but industrious and benevolent clergyman, had showered innumerable blessings, the least of which the idle and self-indulging lord of thousands has neither the grace to will nor the spirit to bestow.

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#### DARTON AND HARVEY BOOKS.

THERE cannot be a greater proof of the degree wherein the general attention is excited towards the important subject of education, than is offered by the numerous works constantly issuing from the press, applicable to the minds and wants of youth.

The names which appear at the head of this article stand foremost among the publishers of works designed for the rising generation. An investigation of the relative merits of some of their publications may perhaps serve to assist parents in a judicious selection from the number which court their attention. In pursuing this examination, we propose to glance at the progress and present state of early education, to inquire into its most desirable and legitimate objects, and to point out in what respects we consider some favoured systems both faulty and inefficient.

By these means, those who take an interest in the subject will be better enabled to estimate the merit or demerit of books written professedly for the instruction and improve-

ment of their children. We are desirous of inducing parents, in the consideration of this important duty, to use their own understanding—to think and reason for themselves—and not blindly to adopt the plans of others, however high may be the authority.

Although great progress has been made in rational education, the science is still in its infancy, and but imperfectly understood by the generality of instructors. The light of reason has indeed dawned in all its brightness on the few ; but it has not yet wholly dispelled the mists of prejudice and ignorance which have so long enveloped this subject. When, however, we consider how much has been accomplished in a short period, we cannot but augur favourably for the future, and trust that those errors which still cling to the practice of education will in like manner give place to views more enlarged and enlightened.

Till nearly the close of the last century, narrow-minded notions on the objects of education, and a careless neglect of its value, almost universally prevailed. The duty of parents in forming the minds of their children was then supposed to consist in sending them to school at a stated age, and dooming them for a certain number of years to the irrational discipline of instructors, whose study was not so much how to improve their scholars, as by what means they could render the task as little burdensome as possible to themselves. The ciphering-books of the sons, skilfully adorned with many intricate flourishes of penmanship, and the samplers of the daughters, artfully worked in all the worsted beauties of cross-stitch trees and landscapes, were taken by parents as sufficient evidence of their children's proficiency. At that period, young persons, and especially females, who were desirous of enlarging the scanty stock of knowledge which they had received at school, found the greatest difficulty in gratifying their wishes. They could obtain no elementary books, no rational explanations of the phenomena of nature by which they were surrounded ; and were forced, unassisted, and perhaps even discouraged, to win their way to intellectual acquirements, which it thus demanded no ordinary energy to attain. Where this energy existed, these very difficulties, and this dependence on self, undoubtedly tended to strengthen the mind and to sharpen the intellect. Yet where the soil has not been duly prepared, and the seeds of knowledge have not been sown, how few are ever found in after life striving to enrich their minds by the pursuit of objects which enoble our nature !

The honour of first leading the way to something more

rational and more worthy of attainment than those acquirements to which instruction had heretofore been limited, belongs to Mrs. Barbauld and Dr. Aikin. It remained for Miss Edgeworth, however, effectually to arouse *mothers* to the performance of this their first duty, to stimulate them to form the minds of their children, and to show them that education can be combined with the more tender offices of maternal love. Her's is the merit of having convinced parents of the importance of the subject; and while she pointed out the most rational method of education, her imitable little works smoothed the path for teachers, by exciting in youthful minds a disposition to profit by instruction.

The great utility of these books, and the avidity with which they were received, soon produced a crowd of contributors to the juvenile library. It is, however, a much more difficult task than is generally imagined, to clothe good sense in simple language, and to render instruction attractive to the infant mind. Accordingly, there are scarcely any writers who approach to the excellence of those who first walked in the rational path; and Mrs. Barbauld, Dr. Aikin, and Miss Edgeworth, still retain their deservedly high station. The two first are thrown somewhat in the shade—perhaps more than they should be—by the superior brilliancy of the latter. All Miss Edgeworth's varied merit is certainly not to be found in the works of her predecessors; but if we reflect on the period wherein '*Evenings at Home*' was written, it must be a subject of surprise how much this work went before its age. The good sense and feeling which pervade the whole, the uncompromising fearlessness and honesty in calling things by their right names, must, even now, excite our unqualified admiration. The leaven of worldliness is not to be detected in a single line; and amid its few contemporaneous publications, this is perhaps the only one which may be re-perused in after life without a feeling of disappointment.

In the present overflowing supply of children's books, there are of course many to be found which are wholly devoid of merit; many which are the offspring of erroneous systems; and very many which, although written in close imitation of the most approved models, entirely fail, from want of judgment and talent in their authors, who go very much beyond the letter, without understanding the spirit of those rules which they would implicitly follow. Notwithstanding all this, numerous publications may be found extremely well adapted to the improvement of youth. Children have now abundant opportunities afforded them to gratify a desire for knowledge: it rests with their preceptors to foster

this desire into a confirmed habit, by a judicious selection of the means within their reach. Parents should ask themselves what it is that they hope and expect from the plans adopted by them in the management of their children.

In the present day, a desire is expressed by almost every class of persons to give to their children the 'best education' which their means and opportunities allow. But what is this 'best education,' about which so much is said? In what does it consist? What are the results which it is desired to produce? Some—the unreflecting, it must be acknowledged—are contented simply with the means, and make no inquiry into the probable effect. With them the 'best education' is the most expensive one; and they believe their parental duty to be fulfilled in proportion to the amount of money which they have lavished on those aids to which fashion gives a factitious value. The sons may grow up idle and dissipated, the daughters vain and frivolous. No matter: the careful father casts up his items, and exclaims—'Did I not supply my boys while at college with princely incomes? Did I not engage for my girls the most expensive masters in the metropolis? Have I spared anything? What more can be done in education?'

Others there are who do look forward—who are ambitious that their children shall shine in the world; but whose false estimate of that world's opinion is equally adverse to a right elucidation of the question; and who, centering their wishes solely in rank and fortune, are influenced accordingly in their ideas of 'the best education.' These parents are impressed with the advantages that may arise to their sons from mixing in early life with the scions of nobility, little reflecting how unlikely are these dreams of ambition to be realised; and that, should their sons participate in these worldly aspirings, and even succeed in the pursuit, it may—nay, we might almost say it must—be through the sacrifice of that true nobility and independence of mind which it were prodigal to barter in the exchange. For their daughters, if they are so instructed as to eclipse those around them in their varied accomplishments, vanity is gratified, and the purposes of education are thought to be fulfilled.

Other parents take higher ground, and erudition is their idol: they believe that the whole sum and substance of the 'best education' are comprised in pouring into the minds of their unfortunate children the greatest possible quantity of book knowledge in the least possible time—unreasonably expecting that this will profit them in after life, by giving to them studious and reflective habits.

These classes are, however, daily diminishing, and the greater proportion of parents are desirous of advancing the rational education of their children. Mothers especially are becoming tremblingly alive to the responsibility attached to their condition, and unaffectedly anxious to pursue the right path. For this purpose it is indispensable to have some fixed ideas on the subject, that the means used may bear some relation to the effect desired. It cannot be too strongly impressed on those who are about to undertake the duties of instruction, that they should accurately define to themselves the general result which will satisfy their wishes. Surely the most rational aim and end of intellectual education must be, *to instil into the mind the love of knowledge, and to endue it with the power of acquiring this in after life by its own unassisted exertions.* Why do we wish our children to be wise and clever? Is it not because we feel, that in proportion as they exercise the faculties of thought and reason, so will their sphere of usefulness be enlarged—so will those habits and feelings be excited which tend to happiness and virtue. If their intellectual attainments are to be independent of these objects—if they fail to purify the heart and refine the mind—then indeed has education been pursued without profit, and without yielding those results which good instruction is capable of producing. Next to the cultivation of our social affections, the pursuit of knowledge is susceptible of being made the greatest source of happiness. Should we not then, by every possible means, strive to give to our children this invaluable blessing, and by teaching them in their early days to use their faculties, make them feel that to them there is no sealed book—that they have the power, if they have the will, to acquire all that man has already acquired?

It would lead us too far from the present inquiry to discuss here, whether public or domestic education is most influential in forming the mind and heart to the love of knowledge and virtue. In either case the mother's early care is necessary, and must be beneficial; for should the pupil be removed to the discipline of a school, there is no candid tutor who will not perceive and appreciate the superior intelligence of children who have been taught by a judicious mother.

Our present object is to inquire into the means afforded to mothers for forming the minds of their children.

Among the numerous works which have called forth these remarks on education, those of Mrs. Hack claim our peculiar attention, as being eminently calculated to assist mothers. This lady has written on several subjects, and has shown herself most successful in the power of attracting and

riveting the attention of children ; while amiable feeling, pure morality, and high principle, characterize all her works. There is no ostentation or sickly display of sentiment, but all is nature, and speaks to the heart as well as to the mind. In her '*Winter Evenings*' she has had the happy art of condensing all that is interesting and amusing in the best narratives of voyagers and travellers. These little volumes are among the chief favourites in the juvenile library, and fully confirm the author's opinion, that children whose tastes are uninitiated prefer truth to fiction. She thus remarks in her preface to this work.—

'When the "quivering light" of reason dawns on the youthful mind, is not "the chequered field of man" the natural and most attractive object of its speculation? Every child hopes to be a man. The business of childhood is to prepare for the full exertion of the mental powers when they shall arrive at maturity. Then will not those unfolding powers be stretched and stimulated in the safest and wisest manner by following the natural impulse of hope and curiosity? Let the actions, and enjoyments, and sufferings of men, form the subjects of the contemplation of children. Care indeed will be necessary in selecting, not only such scenes and events as they can entirely understand, but such as ought to be presented to them. Examples of courage, of patience, of fortitude, of generosity and benevolence, and above all of reliance on the supreme Disposer of events, on occasions of danger and distress, will have a natural tendency to strengthen and to elevate the character. But to obtain this desirable end, the actors as well as the events must be real. Children must not suppose that a scene is *got up for them*, to answer some particular purpose : they must feel the sober assurance that they are treated like reasonable beings, and admitted to the knowledge of the truth, as they are able to understand it.'

Others likewise have pursued this path with success. '*Maritime Discoveries*,' by Miss Taylor, is simply and pleasingly written, and perhaps, as being more elementary, its perusal may with advantage precede that of '*Winter Evenings*'.

'*Harry Beaufoy*' is another production of Mrs. Hack—in which the mechanism of the human frame is explained so simply and so clearly, that children of ten years old can fully understand and take an interest in the perusal. We feel that nothing we could say of the general tendency of this volume would be so satisfactory as a few short extracts from it.

'Mrs. Beaufoy laid her hand upon Harry's shoulder, and in an earnest, affectionate tone of voice said, 'Listen to me, my beloved child. You have hitherto believed a fact to be true if I told you

that it was so, because you cannot recollect that I have ever deceived you ; and therefore you have no reason to doubt my word. But did it ever occur to you that it is possible I may, in some things, be myself deceived—that I may draw a wrong conclusion from some particular fact, and that on some subjects I must necessarily be ignorant ?' p. 21. . . . ' And sometimes I am mistaken, Harry, and suppose I know a thing which on further examination I find to be different from what I had supposed it to be. Now there is one subject, my dear child, on which you ought not to trust me or any other human being. You ought to be sure of this fact for yourself ; so sure as not to leave the possibility of a mistake—it is the existence of that Almighty and Benevolent Being who is the first great cause of all that our eyes behold—the contriver, and maker, and preserver of everything.'—pp. 22, 23.

One other extract must be given : Harry is praising the bee and censuring the butterfly, and Mrs. Beaufoy is made to reply—

' You are mistaken, my dear boy. The industrious bee and the giddy butterfly are equally intent upon their present gratification, and equally regardless of future consequences. There is neither wisdom in the bee nor folly in the butterfly ; both are equally pursuing the end of their being, and each finds its proper and present gratification in the habits which are suited to its respective modes of life. The butterfly is not intended to live through the winter : why then should it lay up a store of food ?'—pp. 139, 140.

In no branch of education has there been a more striking improvement than in works relating to history. These are now not mere records of dates or abridgments of facts wherein children can take no interest, and which, coloured by a strong party bias, give false and prejudiced notions. The only pleasurable recollections derived a few years back from juvenile historical studies, were the cuts which adorned Mrs. Trimmer's Histories ; but the meagre information which the volumes contain afforded no correspondent amusement, and youth finished their education, ignorant of the true philosophy of history, and disinclined to pursue the subject. In the present day the history of almost every country may be found written in a manner calculated to interest young minds, and to awaken curiosity for further information. It has been shown that something besides the mere knowledge of facts can be drawn from the page of history, and by no one has this been done with more success than by Mrs. Hack. Her 'Grecian Stories' are full of interest to younger children, while her ' Stories from English History' will be perused at a more advanced age with pleasure and profit. These volumes impart correct historical knowledge, and at the same time

convey beautiful lessons of morality, the highest and best use of history. They are written in the form of conversations between a mother and her children; the machinery is, in this respect, so ably and pleasingly sustained, that the reader has no difficulty in imagining such conversations to have actually occurred. The moderation and impartiality with which characters are discussed, the entire freedom from all party-spirit and bias, and the exalted sentiments which shine through every page, render this a valuable work to every lover of truth and virtue. Our remarks may, perhaps, appear too laudatory, unless supported by proofs drawn from the work itself, nor can we hope to do it justice by the few short extracts which our limits will allow us to give. We must confine ourselves, in these, to passages calculated to attract the attention of mothers, referring to the volumes themselves for the interesting and entertaining details and anecdotes with which they abound.

'I admire the character of Alfred far more than you do, my dear Harry: for you think of him only as a brave prince, who endeavoured to protect his subjects from a horde of merciless enemies. Any courageous man might have done that; but Alfred possessed qualities far more heroic than a victorious general: for I dispute that man's claim to the title of a *true hero*, of whom nothing better can be said than that he was the principal actor in a great and bloody tragedy. Alfred had far higher claims to our admiration. It is not in the first seven years of the reign of Alfred that we must look for the traces of that wisdom and vigilance which afterwards distinguished him. The only plan he seems to have had in view during that period was to obtain a temporary peace. He made a bad use of his superior knowledge, sought only his own pleasure, and despised everybody about him. But while he was thus earnestly pursuing the knowledge on which he set so false a value, prizes it for itself, and not as the means of doing good, he acquired habits of thinking and reasoning; and it was upon *these* habits that his reformation was founded. When adversity compelled him to give up his studies, he applied his powers of reflection to the common affairs of life; he considered the consequences of his actions, and thus his studious habits, which had nourished his pride and alienated his people, proved the means of enlightening his understanding, correcting his temper, and reforming his conduct. Thus, applying his previous habits of reflection to the real business of life, he gained instruction from every event, and nobly profited by the lessons of adversity.'—First Series, pp. 29, 40, 48, 53.

Is not this a more useful, as well as more just view of Alfred's character, than that generally presented to children? while Richard the Third, who is only known to them as

'the hump-backed murderer,' is, by the impartiality of the historian, brought within the pale of humanity.

' We must particularly attend to the statement of *facts*, and make great allowance for the prejudices of party writers, when they are giving their own opinion of the character and motives of an obnoxious person. It would also be no more than justice requires, to examine, as far as we have the means of doing it, what were the prevailing manners and vices of the times, and to compare the actions of such an individual with those of his contemporaries. If we do this in the case of Richard the Third, we shall find that there is no just foundation for regarding him as that monster of hypocrisy and cruelty which prejudice has represented. On the contrary, his conduct on some occasions proved that he had a heart and sympathies like other men. He was indeed irritable, peremptory, and impatient of opposition to his plans or wishes ; but these are very common faults. You, my dear children, must sometimes be conscious of their existence in yourselves, and you may occasionally observe their effects in the conduct of others. When such dispositions do not manifest themselves by alarming acts of wickedness, we are too apt to disregard their tendency to produce confirmed ill-temper, and too apt to forget that the secret indulgence of wrong feelings is the surest way of preparing ourselves to fall by the first powerful temptation that may assail us.

' Lucy—Then you think that Richard was not so very much to blame, but that his memory is unjustly treated ?

' Mrs. B.—You mistake my meaning ; for though his character has been treated with injustice, this is quite compatible with his having been, not only very much to blame, but exceedingly guilty. He has indeed been accused or suspected of murders which there is no just reason to believe that he committed ; and of hypocrisy so unparalleled, that if credited it would by destroying all sympathy for him deprive us of those striking lessons his character is calculated to afford. History presents us with a splendid picture of MAN under every imaginable variety of character and circumstances, but subject to certain general principles of action or motive to action, which bind together the whole human race in one chain of sympathy, thus rendering the virtuous energy of some, and the crimes and misfortunes of others, subjects of interest and instruction to all. We should therefore carefully avoid unduly exalting or degrading the heroes of the scene, but regard them as they are, creatures of like passions with ourselves—like us, passing through a state of trial, and surrounded with circumstances connected with evil and with good. These circumstances have a natural influence over our conduct ; and if our understandings are weak, if we have no moral energy or fixed principles of religion, they will probably govern us as animals are influenced by whatever acts upon their senses. Every intelligent being knows that he has reason to direct

his choice, and duties to perform ; and that it is incumbent upon him to consider the consequences of his actions both to himself and others.'—Third Series, pp. 3, 7, 8.

There is an original vein of thinking in all this lady's observations on those virtues and qualities which are too generally held up to the indiscriminate admiration of the young.

' Patriotism, especially when called into action in a barbarous age, too often partakes of the ferocity by which it is surrounded. It has ever been acknowledged as a sublime principle, the source of heroic emotions, which none but great minds can truly feel ; and being always exerted at the price of many personal sacrifices, nobly devoting itself for the benefit of others, it irresistibly compels the sympathy of mankind, wins their admiration, and justifies their praise. Society has made a wonderful progress in civilization and humanity since William Wallace attempted the deliverance of his country ; and while we refuse to credit the exaggerated accounts of his enemies, who describe him as more cruel than Herod or Nero—as one *that never had pite of Inglsman no ways*, we may believe that he plundered, burnt, and slaughtered often without mercy ; for such was then the general manner of carrying on war : yet perhaps we may fairly say, that the cruelties of Wallace belong to the barbarous character of the age he lived in, but that his noble spirit was his own.'—p. 77.

Again :

' The notions of honour inspired by chivalry were not to be trusted as a rule of life. Edward the Third and his equally celebrated son had but too little sympathy for the evils occasioned by war, and they were regardless of its justice ; but the pomp and glorious circumstances attending were their passion ; and the excitement and applause produced by their heroism afforded them the highest gratification. It would be absurd to expect *consistent virtue* from any principle of action that springs from pride or the love of applause, yet many striking traits of honour and generosity adorn the annals of chivalry, which can boast of heroes but little inferior to those of Crecy and Poitiers. Froissart relates a pleasing instance of the honour and generosity observed by the knights of the fourteenth century in their intercourse with each other. In the evening, when each retired to his tent with the knights and esquires he had that day taken, the victors asked the captives what they could pay for their ransom without much hurting their fortunes ? and willingly allowed them to fix the price which it would be convenient for them to pay, without feeling any distrust of their honour. Yet these were the very men who would drive off the cattle, destroy the crops, and burn the cottage of the peasant, without one feeling of compunction. In this campaign the courteous and humane Black Prince laid waste the whole country by

fire, from Bordeaux to Narbonne. So partial and inconsistent was the humanity of chivalry.'—Second Series, pp. 207, 208, 213.

Biography, equally with travels and history, may be made to assist in the instruction as well as the amusement of youth. A skilful display of the difficulties which great talents have sometimes had to encounter, and the energy and perseverance which have been required to surmount obstacles in order to attain to excellence or success, may, in the hands of an able writer, be made the means of moral as well as intellectual improvement, supplying the highest motives to useful ambition, and regulating and directing the aspirings of genius.

Few works of this description are, however, wholly unexceptionable; there is too much either of moralizing or of dry narrative—so difficult is it to avoid extremes. A little book was published several years ago by Darton and Harvey, entitled 'Buds of Genius,' and intended as an introduction to biography. It is written simply and naturally, and is calculated to induce in young children a taste for this kind of reading. The author of 'A Sketch of the Life of Linnæus' has, we think, also completely succeeded in the art of rendering biography amusing and instructive. This short account is made, we might almost say, deeply interesting; and the reader, be he young or old, will follow with lively sympathy the steps of the philosopher from poverty and obscurity to riches and fame.

Mrs. Wakefield has been known as a writer for many years; and to judge by the numerous editions which her works have reached, she has been long considered as a popular writer. Therefore, in noticing those books which may be useful to a mother, we ought not perhaps to pass her entirely without comment; the more especially as her works make so conspicuous a figure in the catalogue of Messrs. Darton and Harvey. This lady has certainly been most indefatigable in her literary occupations, and has produced many volumes on almost as many subjects. When she first began to write, there were fewer labourers in the field, and on this account her books may perhaps have obtained a greater circulation than they would have commanded in the present day. They were found useful before better things appeared, and it would perhaps be ungracious wholly to discard one who for many years was so sedulously employed for the improvement of youth. In her lighter works, Mrs. Wakefield certainly affords some entertaining information, but they are not set off by the graces of style and man-

ner ; and when she ventures upon the task of explanation or description, the immeasurable distance between her and the author of ‘ Harry and Lucy ’ is plainly perceptible. This lady has nothing original about her ; the machinery of her books is clumsily managed, and her children are the most unnatural little pedants in the world. To give an example ; her ‘ Mental Improvement ’ opens with the following conversation :

‘ SOPHIA—How happy are we, my dear sister, to be blessed with kind parents, who devote so much time to our instruction and amusement ! With what tenderness do they listen to our conversation, and improve every subject that arises to our advantage ! ’

‘ CECILIA—I am never so happy in any other company ; they have the art of rendering instruction and study agreeable. Though I tenderly love my governess, I feel such a superior attachment to my mamma, that I am not able to express it ; and I am sure Mrs. Selwyn will not blame me for it, for she always advises me to look up to my father and mother as my best and kindest friends.

‘ SOPHIA—Mrs. Selwyn, our worthy governess, is too wise and discreet to be jealous of our preferring our parents to everybody ; she would sooner direct us to regulate our affections properly, and undoubtedly give them the first place.’

It would not, however, be fair to this really respectable writer, to take leave of her with the foregoing quotation. She is always found to inculcate moral, though rather commonplace sentiments : it is her aim to lead the youthful mind to religion and virtue ; and she occasionally evinces some sound and rational views upon the subject of education.

Mrs. Wakefield’s ‘ Instinct displayed ’ is found by some young people amusing, and it forms one among the number of those books which tend to give interest to the study of natural history. Very young children delight in looking at pictures of animals, and in hearing anecdotes concerning them. The press abounds with writings upon this subject, adapted to all ages. In the ‘ Natural History of Quadrupeds, by a Lady,’ a great deal of information is very plainly given. Its whole tendency is to excite good feelings in the young reader, and to induce him to treat the brute creation with compassion and tenderness.

Bingley’s ‘ Animated Nature ’ is likewise a very useful book. The anecdotes which are interspersed are generally interesting, and the classification is so natural and so devoid of all technicalities, that the pupil will acquire this information without considering it part of his school learning. This is as it should be—enumerations of classes and orders, in

terms to which the learner is unaccustomed—which he finds it difficult even to pronounce, and much more so to remember, should be carefully avoided till the pupil has acquired a love of the pursuit sufficiently strong to submit to the labour of mastering its technical language. We see this fault strongly exhibited in a small volume entitled ‘Rudiments of Conchology.’ The well-executed coloured engravings with which it is illustrated immediately attract attention, but the science itself is soon discovered to be repulsively dull in consequence of the numerous technical terms with which the work is crowded. To become acquainted with, and properly to apply them, would require an exercise of memory and a degree of attention which would most generally be deemed disproportionate to the value of the attainment. This defect does not display itself so forcibly in the ‘Rudiments of Mineralogy,’ by the same author; the classifications here are not so formidable, and it is in consequence rendered a less forbidding work. Perhaps this is rather attributable to the subject, the utility of which is more apparent. If even a mother succeeded in convincing herself, it would be a very difficult task to persuade her child, that any advantage could be found in committing to memory the technicalities of conchology. This species of knowledge it never can be requisite for young people to learn, unless they show a decided taste for the pursuit. Some mothers, however, are so solicitous that their children should become acquainted with any and every subject upon which works for young people are written, that it is to be feared lest many a little victim of ill-judged anxiety may be doomed to learn by rote ‘Parnophorus, Emarginula, Fissurella,’ &c. . . . . to the hundredth term.

The ‘Geography of Plants,’ by Mr. Barton, though capable of being used with advantage in the instruction of youth, may likewise be perused with interest and profit by all classes of readers. We notice it in this place, as an exemplification of the fact, that much information may be imparted without the introduction of any but the most perfectly familiar terms. The names of the plants are all given in English, and their botanical terms are placed at the foot of the page. The maps which illustrate the work are, we believe, quite original. They are maps of the principal divisions of the world, in which the names of plants are substituted for the names of places—cultivated plants being distinguished by Roman letters, and those growing wild by Italics. By a reference to these, the relative vegetation of the whole earth is more

clearly seen than by anything which could be written on the subject unaccompanied by such happy elucidations. The author justly observes that

' It is a subject which appears well calculated to interest every one who has a taste for the study of nature ; but while wrapped up in the technical terms of botany, as well as in a foreign or dead language, the number is comparatively small of persons who are qualified to participate in the pleasure which it is capable of affording.'

This book is written in a plain manner, giving a comprehensive view of a very interesting subject, and is peculiarly adapted to excite a love of Nature, and to induce a more particular examination into her beautiful works.

' The Wild Garland,' by the author of the Life of Linnæus, is an unpretending little book, applicable to the same object. It does not profess to give any regular insight into botany as a science, but the writer is evidently a sincere lover of nature, and perfectly familiar with that study for which she would excite a taste.

' It professes not to throw any fresh light on the subject, nor to initiate by any new method into its hidden mysteries ; but simply to give additional interest to the study of botany, by the association of ideas poetical, historical, or classical, with some of the beautiful productions of our fields and woods.'

An author who succeeds in giving to the pupil a desire to go farther in the study of any subject, does infinitely more service to the cause of education than he who writes the most elaborate treatise. There are three principal causes which prevent so many writers from producing this desirable effect.

The first cause of failure is want of *simplicity* in elementary books intended for the earliest age. We are aware that it is a difficult task to bring the mind down to a level with the infantine capacity. Puerility is too often mistaken for simplicity, and an unmeaning, familiar jingle, almost approaching to vulgarity, is considered better adapted to catch the attention of the little scholar than playful good sense. Even those who in their prefaces profess to be aware of this, as well as of numerous other faults in writers who have preceded them, fail in their attempts to sustain simplicity of language. They begin with sentences adapted for mere infancy, but soon, forgetting their caution, plunge the poor child into all the intricacies of obscure phraseology. There is a striking example of this in a small elementary book translated from the Italian of Count G. Bardi. It begins thus :—

' Man stands straight on his feet. His head is straight on his  
APRIL, 1831.

shoulders. Beasts have a long snout. They walk on four feet. Man has two arms. He has two legs. He takes things with his hands. The sole of his foot lies on the ground.'—p. 1.

At page 68 we find this *truly luminous* description of a bee-hive:—

'Their work is composed of combs placed vertically, and consisting of horizontal cells, joined together at the sides and bottom: the cells have six equal sides, and the bottoms, which are common to two opposite ranks, form each three equal lozenges. It has been proved on geometrical principles, that this form requires least substance, and confers the greatest stability.'

These two short quotations form together exactly one page, sixty-eight of which would not comprise many lessons. The writer must therefore suppose, that after the lapse of a very short interval, the child's intellect would have ripened surprisingly, or that his book possessed the miraculous power of inspiring him with intelligence sufficient to comprehend a description, that perhaps no one previously unacquainted with the subject could understand. It is not any want of indulgence towards the little work before us which prompts these remarks; we are actuated solely by a desire of pointing out to those who write for children, faults against which it is essential for them to guard.

The second cause of failure is extremely prevalent in all children's books except those of the highest class. Too much heterogeneous information is crowded into works written professedly for amusement; and, in consequence, the mind of the young reader is bewildered and fatigued, instead of his curiosity being excited. Some writers, in attempting to follow the example of Miss Edgeworth, wholly mistake her design, which is not merely that of imparting instruction, but of creating a desire for knowledge. They estimate their books in proportion to the number of subjects on which they treat, without having any regard to method or measure. There is a constant design on the little reader to inveigle him into some ambush of learning. While engaged in the delights of a ball, he finds himself suddenly entrapped into a lecture on insects, and a party of pleasure frequently terminates in a dry dissertation on natural philosophy. In one book the little hero, with a taste peculiar to himself, is made to derive great entertainment from the second reading of an obscure, abstruse lecture on astronomy, and to take delight in the information communicated, even if it has not the remotest connexion with the subject under consideration. After a rambling discourse on the swallow, an account of sponge is thus *aptly* introduced:—

' HENRY—Thank you. Look at this piece of *fungus* I have broken from the root of that old beech: it looks like sponge. Where does sponge grow?'—*Henry and his Tutor*, p. 8.

The fault which we are now exposing is perhaps not so much that of writers as of parents. There is at present an unnatural demand for these productions. Many persons are painfully anxious that their children should learn everything at full speed, and be what is called clever. Accordingly, in every recreation knowledge is sought to be insinuated with an eagerness which defeats its own purpose; for, pressed down by the overwhelming load of learning, the child, who was fondly expected to spring up into a giant, remains nothing but a pygmy.

The minds of parents having been powerfully roused to the great duty of educating their children, it is perhaps only a natural consequence that, for a time, they should take the opposite extreme, and that where too little had been so long done, too much should now be attempted. The fault of the present day is accordingly that of loading the young mind with more aliment than is beneficial to its growth and expansion. We would earnestly strive to guard it from this repletion. Sound and rational views have of late been so much disseminated by those who reflect on the subject, as to lead to the hope that in a few years this system of ultra-education will soften down into the happy medium.

The third cause of failure which remains to be examined is a more fatal error than either of the foregoing: it does not arise only from the incompetency of writers, but the badness of a system. Memory is put in too great requisition, and the number of words is beyond all proportion greater than that of the ideas acquired. A rational mother will look beyond the present moment for her children, and if convinced of the inefficacy and pernicious tendency of a system, will willingly abandon it. The education of very young children is now much more free from error than that of a more advanced period; and the infant mind is rarely, in the present day, disgusted on the threshold of knowledge by austere looks and difficult tasks.

Is it natural that the mind, as it gains strength by exercise, should become less pleased with the exertion? This involves so apparent a contradiction, that the solution can only be found in the injudicious manner wherein education is conducted. If children be led to use their understandings—if they be induced to think, compare, and reason—their curiosity will continue to be excited, and their desire of acquiring knowledge will lead them willingly to overcome difficulties, if the

instructor be careful that none be presented which it is not in their power to surmount. The mere pedagogue may smile at the idea of children reasoning ; but children, and very young ones too, delight to have their minds exercised, provided it be done judiciously, and that the effort be discontinued before it becomes fatiguing. The desire of acquiring new ideas evinces itself in such early childhood, that nothing more would appear necessary in education than gradually and sparingly to administer to this appetite for novelty, by displaying some of the exhaustless treasures which are within the reach of all who seek them. How lamentable it is that this spirit of inquiry should ever be crushed ; that the youthful mind should be loaded with studies which cannot interest it, and which we may fear will quickly create a disgust for the knowledge forced on it in a form so distasteful !

We can scarcely too much deprecate that system of instruction in which every valuable rule is committed to memory, where every species of information, useless as well as useful, is made the subject of question and answer, and the words of the author are to be carefully repeated. So far from insisting that pupils should go through these wearisome tasks, the rational instructor would never require them, and would interdict the system of answering questions by rote. Let it be remembered that reasonable beings, not parrots, are the objects under instruction, and that they have other and higher faculties to be cultivated than mere memory. Now it happens, that of all the powers of the mind, memory, as far as it is merely the aptitude of learning by rote, is of the least consequence to us in after life ; and yet this faculty, useful only as a subordinate,—this humble assistant to the nobler powers of judgment, reason, and invention,—usurps their place, and reigns paramount in the academic hall. It would be as reasonable, in developing the physical powers, if only one set of muscles were brought into action. It is said by the advocates for mnemonic tuition, that memory alone can be cultivated in childhood, as the other powers of the mind do not show themselves until riper years. This is entirely a fallacy : it is always found, where the attempt has been made to call forth higher faculties, that memory is precisely that one which they find most irksome to exercise, except as the handmaid to other powers. Familiar explanations, when unaccompanied by hard words, will be understood and applied much more readily by the pupil than if he had learned a form of words by rote ; and while he is thus adding to his stock of knowledge, he will at the same time be habituating his mind to the formation of distinct ideas.

It will certainly sometimes happen that preconceived and erroneous notions will render a satisfactory explanation the work of time and patience ; but this only proves of how much importance it is to remove the difficulties which perplexed the little inquirer, and not to allow him to rest satisfied with words instead of ideas. Hence it may be easily seen why memory is singled out, to the exclusion of the other mental powers. It is much less trouble to instructors to hear a lesson than to give an explanation ; and the secret spring of their whole argument is discovered in the concluding exclamation—‘ How can it be expected that we are to sacrifice ourselves to such irksome drudgery as to explain the never-ending questions of a curious child ? ’ During the hours allotted to study, unceasing attention on the part of the teacher is certainly required ; but we are now discussing what is most advantageous for those who learn, and not what is most pleasing to those who teach. In the satisfactory progress of her pupils the mother will find her reward. In a few—a very few—years, she will view them pursuing that path with pleasure over which she has conducted them in the rugged way, and her superintendence will then be only occasionally required to guide them through any intricacies which may occur. Should she at length see them, in the full vigour of their intellect, outstrip her in the race, how will she exult in the perfect development of those powers which she first called into action and nurtured into strength !

When the system of cultivating the memory alone is wholly pursued, instead of inviting on to knowledge, every thing is done to create and confirm a distaste for it. Long tasks are assigned whose meanings are not understood, and the memory is stored with terms to which no ideas are affixed. The understanding has no part in education : a quick memory gains the palm ; and, in consequence, the pupil grows up without ever having learned to think. It is essentially necessary, in plans of rational education, never to teach children anything which they cannot perfectly comprehend : if a subject prove too abstruse, put it aside till their more ripened intellects enable them to comprehend it. Perhaps, in pursuing this method, they may sometimes appear backward in the race ; and maternal vanity, or rather an amiable diffidence in her own powers of instruction, may induce a mother to stimulate her pupils to injurious exertion. She cannot be too earnestly dissuaded from this course. Let her ever keep in recollection, that she must be carefully storing the minds of her children with clear ideas, giving to them the love of knowledge and the habit of exercising their

understandings; and that it is of the first consequence to the success of her efforts that she does not make learning assume a repulsive shape.

The publications of Darton and Harvey are nearly free from the defect which has called forth the above remarks. Catechisms on every imaginable topic are not to be found in their long catalogue of books, and we can only single out one work to exemplify our observations. This has, however, reached the seventh edition, and would on that account alone deserve some notice. The title of the work is 'English Parsing, by James Giles.' Although we had already felt great sympathy with children in all their many trials, yet, till we saw this book, we never suspected the extent of their inflictions. We were not aware that they were ever constrained, except in acquiring the learned languages, to follow the truly barbarous custom of repeating the rule at every word they parse. What possible effect can these repetitions have on a child, except to disgust him with grammar?

The greater proportion of what are called school and class-books are intended for the cultivation of the memory alone. From what has been already observed, it is very evident why these have obtained so much favour. But in those schools where education has been conducted in a rational way, and where the general intellectual improvement of the pupils is made the first object, these books have been discarded. In domestic education they certainly should never find a place. The imperfect knowledge obtained from the 'Preceptor's Assistant,' and other books of that kind, is worse than useless—it is pernicious. Those young people who have learned so many words at the expense of so much time and labour, are too apt to be vain of their superficial acquirements, and to be quite satisfied that they are wonderfully clever—have they not gone 'right through the book,' and pronounced every hard name with perfect propriety, and what greater achievement can possibly be required on these subjects? It is this knowledge of mere words which makes pedants; those who have penetrated beyond the surface, never pride themselves on their acquisitions, feeling how very small these are, in comparison with what is still to be learnt. To be able fluently to reply to abstruse questions, is by the many considered synonymous with understanding them. But would any reflecting parents be willing that their children should rest contented with such knowledge?

It is highly useful that youth should be led to acquire general information, and that their studies should not be confined to the Latin and Greek accidence; but let it

ever be borne in mind, that there is a great difference between *elementary* and *superficial* general knowledge. In the one case the pupil is led by easy steps into the right path : the way is clearly pointed out to him ; and, whether his taste lead him to pursue it farther or whether he only proceeds a few paces onward, he walks in the clear light of day.

In the other case, everything is seen through the medium of a fog, the paths are dimly discerned as in a labyrinth, and the whole appears a mass of confused images. Books of this kind certainly present a very imposing appearance to the unlettered, and we need not be surprised at their being found so attractive, especially in ‘establishments for young ladies.’ Imagine only one volume within the compass of about three hundred duodecimo pages, comprising instruction in the form of question and answer upon every art and science, besides innumerable miscellaneous subjects, from natural philosophy and religion, down to heraldry and the most appropriate manner of addressing lords and ladies—all these, too, requiring nought for their attainment save an exercise of the memory. Armed with this potent engine, the head of the establishment takes the field ; and in her prospectus or manifesto, promises anxious mammas to accomplish the victory over subjects, the very names of which the good lady herself might have remained in happy ignorance of, but for the aid of so inestimable a treasure. Works of this genus are highly prized by that numerous class who feel no pleasure in the act of acquiring knowledge, yet desire the appearance of its acquisition. But ‘The Preceptor’s Assistant,’ one of the volumes which has called forth these remarks, holds out a still further attraction to ladies in the addition of a catalogue of such Latin phrases and their English meanings as are frequently used in books or in conversation. These pocket cyclopædias, if compiled with ability, would not perhaps be without their use as works of occasional reference to those who have not enjoyed many opportunities of acquiring general information. If people will write and publish such works, it is, however, incumbent on them to use every precaution against the admission of incorrect statements and erroneous principles. ‘The Preceptor’s Assistant,’ and the ‘Parent’s Catechism,’\* both written by the Rev. David Williams, are by no means guiltless in these respects. Among the numerous inaccuracies, to call them by no harsher name, which abound in these works, one or two examples from each will perhaps suffice. What shall we say of the carelessness which states the revolution of our

\* These books are not published by Darton and Harvey.

attendant satellite the moon about the *sun*, to be performed in  $27\frac{1}{2}$  days nearly? The meaning really intended is obvious to those who have the slightest knowledge of astronomy—but they are not the parties whom Mr. Williams professes to teach. We will not weary the reader by a criticism on the vague description of water given in both books, wherein the relative component parts are stated without defining whether these relate to bulk or weight—if the latter, according to the most approved analysis, the proportions are incorrect; but if the former, as must be inferred from the preceding answer, they are then egregiously false. It is made more palpably ridiculous in the second of these books, where the component parts of water are said to be 85 parts oxygen and 15 *nitrogen*. The preface informs us, that in consequence of the increasing and constant demand for this book, the present is a stereotyped edition, and therefore it may be presumed more than usual care was bestowed on its examination previous to publication. How many thousands have been and will be forced to learn that water is composed of oxygen and *nitrogen*! while some who appeal from Mr. Williams to Mr. Williams will be sadly perplexed to determine, whether the stereotyped nitrogen of the ‘Parent’s Catechism,’ or the later printed hydrogen of the ‘Preceptor’s Assistant,’ be the true word. As to the different *meaning* which each word conveys, a pupil who is taught by these question-and-answer books would rarely pause to inquire. Should one, however, be more adventurous than the rest, and seek to emerge from this sea of words, on, on he is hurried to the next and the next answer—answers, not questions, are the learner’s duty. It may perhaps be thought of little moment that the pupil is made to consider the Georgium Sidus as being only four times as large as our earth; but it is of consequence that the learner should not imbibe the false notion that a sphere whose axis is 7900 miles, is nearly one fourth part as large as another sphere whose axis is 35,000 miles; such being given by Mr. Williams as the diameters and relative magnitudes of the two planets—an error into which the Reverend author could hardly have been betrayed by carelessness alone. These books abound with statements copied from vague speculations, but which are made with the confidence that alone should accompany the best established facts, and with assertions palpably and grossly absurd. ‘The quantity of mineral and saline particles which rivers wash from the different soils through which they pass, and carry into the sea,’ is assigned as the cause of its saltiness. No reason, however, is given why these rivers convey the *whole* of the saline par-

ticles to the sea, without suffering any to mix in their own fresh streams. It would be an unprofitable, as well as a disagreeable task, to point out other glaring defects, which force themselves on our attention in turning over the pages of these volumes. Enough has been said if we have induced any mother to reject this kind of tuition for her children.

Some books there are of question and answer of a very different description, and which, no doubt, have merit. The mode of explanation adopted in these is calculated to impress upon the mind much useful information, and, if employed sparingly, might perhaps assist the business of instruction. We have seen a little work, taken from the French, entitled ‘Why and Because,’ which, we think, may be classed among these few exceptions. Here all the phenomena of common occurrence, about which children may be led to inquire, are clearly and simply explained. But even such as these we would recommend to be used only as text-books, and the reasons should be given not in the exact words of the printed answer. Children fancy a rule or explanation out of a book is much more difficult of comprehension than one given from the mouth of the teacher.

A striking improvement has lately taken place in the manner of teaching geography, and no better proof can be adduced of the advantages resulting from a departure from the old method of learning words by rote, without giving the memory any auxiliary in the irksome task. The present rational mode of teaching geography by blank maps, and of tracing the routes of different travellers, instead of being a task, becomes an amusement to children, while it gives them a much clearer conception of the relative situations of countries than if they learned a long list of definitions and the names of every town and village, lake and river, in the known world.

In the ‘Child’s Atlas’ and its companion, geography is clearly and simply explained ; and they are, in almost every respect, what elementary books should be.

Among the numerous books written for the instruction of youth, it is some matter of surprise that so little has been attempted towards simplifying the elements of the lower branches of mathematics. Even arithmetic is still very universally taught more as a mechanical art, dependent on the memory, than as a science. This is a part of female education which is too commonly neglected ; the best governesses seldom understand anything beyond the practical operations of the four first rules in arithmetic—to be initiated in the mysteries of the rule of three and of practice argues a rare

degree of proficiency. Ladies are, therefore, seldom sufficiently conversant with the rationale of figures to make, in this respect, good instructors to their children ; and perhaps a treatise on rational arithmetic, in which the nature and property of figures should be clearly and familiarly explained, might prove useful in giving to mothers a better idea of what they are about to teach. If arithmetic be properly explained, if the child be allowed to use his understanding, without being disgusted with long sums, the progress will be pleasing as well as rapid. Geometry and algebra may likewise be taught with advantage to youth of both sexes, and can be understood at a much earlier age than is generally imagined, while no other study tends so much to give habits of patient investigation and solid reasoning. To attain any beneficial results, however, the manner of teaching mathematics must be widely different from that which still very much prevails, and was universally in fashion a few years back. The rules of algebra were learnt by rote, without being in the least comprehended ; and we have known all the propositions of the first few books of Euclid committed to memory without the student understanding or feeling any of the beautiful truths of geometry, and without having the most distant perception of the chain of reasoning which runs through the whole ! As reasonable would it be to drag him blindfold over a picturesque country, where he is only sensible of the ruggedness and weariness of the way, and thence expect him to imbibe a love of travelling. These remarks on the study of mathematics have been called forth by a short work on Perspective, published by Darton and Harvey—the only one at all approaching to mathematics in their whole collection. This treatise, by Mr. Daniel, purports to be written for the use of ladies, and those who do not understand geometry. We confess we are no friends to this description of books, especially for juvenile education. The work before us appeals neither to the senses nor to the reason, but everything is to be taken for granted, and done as described—thus assuming that ladies are not reasoning beings, but imitative creatures, like monkeys. We should consider that attempts at rational education had entirely failed, where the pupil could be contented to avail herself of practical rules, without examining into their correctness.

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## MISCELLANEOUS.

## FRANCE.

THE Journal d'Education for July last contains some good remarks on the mode of teaching children to spell, or rather to write words correctly. We are induced to draw attention to this fact, to show those of our own countrymen who still follow the usual mode, that it is not in England only that new methods of teaching a thing so indispensable as orthography are gaining ground. The fact is, the orthography of words, or the adaptation of the written characters of a language to the pronunciation, can never be acquired, except by writing. It is important, then, that a child should learn to write very early, and that he should learn the orthography of words by actually writing them on a slate or paper. The mode of doing this may be varied in several ways, according to the number of pupils that a person has to teach.

A Prospectus of the 'Ecole Centrale des Arts et Manufactures' was published at Paris in 1830. The time of the year in which it was published may be conjectured from these few words on the cover,—'La manie des places devrait être passée de mode en France : un grand exemple vient d'en montrer l'instabilité. Les jeunes gens savent maintenant qu'il y a quelque chose qui vaut mieux qu'une place, c'est la capacité nécessaire pour se créer une existence indépendante.' The object of this school is to form civil engineers, directeurs d'usines, principals in manufacturing establishments, and teachers of the applications of the sciences. The course comprises three years. For the details, which are very minutely explained, we refer to the small pamphlet itself.

## GERMANY.

The intelligence of the death of Niebuhr has been everywhere received with deeper regret than is commonly felt at the death of a distinguished scholar. To trace the history of his life, and the course of his important studies, is an object worthy of the pen of Savigny, who, we are informed, has undertaken to perform this duty to the memory of his friend. We regret that we are unable at present to give more than the following sketch of Niebuhr's life.

B. G. Niebuhr was born, in 1775, at Meldorf, a little town of the district of Dietmarschen, in the duchy of Holstein. His father was the celebrated traveller, Carsten Niebuhr, who had no children except this son and one daughter. From him he received his earliest instruction. (We cannot refrain from quoting the account which Niebuhr himself gives of their instruction in the biography of his father\*). 'He instructed both of us,' says he, 'in geography, and related to us many passages of history. He taught me English and French, better, at any rate, than they would have been taught by

\* See the Life of Carsten Niebuhr, in the Library of Useful Knowledge, p. 23.

any body else in such a place; and something of mathematics, in which he would have proceeded much farther, had not want of zeal and desire in me unfortunately destroyed all his pleasure in the occupation. One thing, indeed, was characteristic of his whole system of teaching;—as he had no idea how any body could have knowledge of any kind placed before him, and not seize it with the greatest delight and avidity, and hold to it with the steadiest perseverance, he became disinclined to teach whenever we appeared inattentive or reluctant to learn. As the first instructions I received in Latin, before I had the good fortune to become a scholar of the learned and excellent Jäger, were very defective, he helped me, and read with me Cæsar's Commentaries. Here, again, the peculiar bent of his mind showed itself;—he always called my attention much more strongly to the geography than the history. The map of ancient Gaul, by D'Anville, for whom he had the greatest reverence, always lay before us. I was obliged to look out every place as it occurred, and to tell its exact situation. He had taught me to draw maps, and I could not make him a more welcome birthday-present than a sketch of the geography of eastern countries, or translations from voyages and travels, executed as might be expected from a child. He had, originally, no stronger desire than that I might be his successor as a traveller in the East; but the influence of a very tender and anxious mother upon my physical training and constitution thwarted his plan, almost as soon as it was formed. He taught me, by preference, out of English books, and put English works of all sorts into my hands: at a very early age he gave me a regular supply of English newspapers.'

This predilection for England afterwards determined his father to send Niebuhr, for several years, to this country.

He studied the law in the University of Kiel. In 1798 he held a situation in the Royal Library at Copenhagen. Two years afterwards he was called to become an assessor in the department of economy and commerce; and in 1803 he was made one of the directors of the Danish bank.

In 1810 he entered the Prussian state service. He was appointed Professor of History in the new University of Berlin, and Member of the Council of State. It was here, in 1811, that he published his Roman History; a work, which alone, even in its unfinished state, will immortalize his name.

As a public lecturer he came forth with diffidence, yet he openly and strongly avowed his dissatisfaction with many of the arrangements of the new university. Of higher interest, for him, than his lectures, and more analogous to his previous pursuits, were the discussions in the privy council. But even here he was remarkable for the impetuosity with which he always endeavoured to carry his point. In 1816 he went to Rome as minister resident of the Prussian court to the Papal See: here a new and immense field was thrown open to his historical and philological researches. He soon availed himself, to the great advantage of literature, of his access to the Vatican Library, before the appointment of Majo to the post

of librarian, whose discoveries have remained far behind the wide extent of Niebuhr's researches. During the nine years that he held the post of Prussian minister at Rome, his house was open to all distinguished scholars and artists, more particularly to all Prussians, that visited Italy; and he was always ready to give them his assistance or advice, or to interpose his influence on their behalf.

In 1823 he returned to Berlin; but as he could not well agree with the influential men in the government, he retired to the University of Bonn, which had then recently been founded, and of which he soon became one of the brightest ornaments. He delivered public lectures on Roman antiquities, and on ancient and modern history, and thereby contributed materially to the enlivening of this branch of study: but, perhaps, of still greater importance was the private encouragement and assistance of every kind which he gave to many young men who became personally acquainted with him. As one of his greatest merits, we cannot omit here to mention the new edition of the Byzantine Historians, which he set on foot, and which he himself opened by his edition of Agathias.

His sudden death, on the 2d of January, in this year, (occurred, as his friends say, by continual agitation, on account of the great political events of the period,) has deprived Germany of one of her greatest scholars and best citizens. His loss, at a time so abundant in eventful changes, is irreparable; for even if genius and profound learning might be found to supply his place in the field of literature, when could Germany hope to possess these again, united with that unsullied probity, with that unenvious love for everything great and good, and with that true patriotism, which was the prominent character of Niebuhr?

**GÖTTINGEN.**—The senate of this university have given notice, that the prælections and other studies, which have remained suspended ever since the 8th of January last, will be resumed without fail on the 11th of April next. But this, without interfering with the summer courses of lectures, which will commence between the 23rd and 30th of the same month. The fresh disturbances, which broke out here on the 17th of this month, were entirely confined to the military, and were appeased by the removal of the Minden battalion, which mutinied and insulted the officers. The students and citizens abstained from all interference.—*Göttingen, 28th February.*

**STATISTICS OF THE PRUSSIAN UNIVERSITIES.**—During the winter *semester* of 1828 and 1829, the six Prussian universities were attended by 6164 students, comprising the Catholic students of theology and the theological faculty of Munster. Out of this number 4970 were Prussian subjects, and 1194 belonging to other states.

The theological faculty included 3015 students; that of law, 1639; that of medicine, 692; and that of philosophy, 818. The Catholic students of theology amounted to 867.

The Protestant students of theology amounted to 2148. Hence, reckoning the Protestants at 7,406,087, we find there are three

theological students, in each year, for every 10,000 people; and taking the Catholics at 4,651,180, there are two theological students for every 10,000.

The students were distributed among the six universities of the kingdom during the *semester* of 1828, 1829, in the following manner.

Berlin . . . . .	1752
Bonn . . . . .	909
Breslau . . . . .	1129
Greifswald . . . . .	183
Halle . . . . .	1830
Koenigsberg . . . . .	452
Munster . . . . .	399

The Prussian monarchy now contains 109 gymnasia, thus distributed: in east and west Prussia, 12; in Brandebourg, 17; in Pomerania, 6; in Silesia, 20; in Posen, 3; in Saxony, 23; in Westphalia, 10; and, the Rhine Provinces, 18.—*Leipziger Litteratur-Zeitung*.

BERLIN.—There is now publishing at Berlin a periodical Review, entitled 'Kritischer Wegweiser.' The object of it is to improve geography, mathematical, physical, and hydrographical. The first part of the review contains notices of maps, with remarks on their merits and defects. In the second part we find geographical and hydrographical observations, with many useful results, that have been obtained in various departments of the science.

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*Ramayana, id est, Carmen epicum de Rama rebus gestis Poetæ antiquissimi Valmicensis opus. Textum codd. MSS. collatis recensuit, interpretationem Latinam et annotationes criticas adiecit Aug. Guil. a Schlegel. Voluminis primi pars prior. 8vo. Bonnæ ad Rhenum, typiis regiis, sumptibus editoris, 1829. pp. 880.*—The learned editor, A. W. Schlegel, asserts that under the common name of epic poems the critics usually confound two kinds of composition, which are essentially different: an epic, like that of Virgil, of which the sole object is to delight the reader, and wherein the poet consciously and intentionally departs from historical truth; and an epic, like the Iliad, which preceded the age of regular history, and in some measure supplied its place. He justly deems the latter species of epic the more valuable, and he considers the *Ramayana* as belonging to that more important class; and being animated by an honourable and most generous enthusiasm, he seeks to confer a great benefit upon literature, and to erect a lasting monument to his own fame, by publishing, in a beautiful form, a pure and most correct text. In a preface of seventy-two pages, the illustrious editor has given an account of the *Ramayana*, and of his critical toils in collating twelve MSS., in which he has been greatly assisted by his strenuous and able friend and disciple, Mr. Lassen. The poem contains nearly as many lines as both the Iliad and the Odyssey, but the verses are shorter; it is not our design, however, to speak of this Indian epic at present, or of the merits of its editor and his coadjutor; we notice it only on another account, for a matter most

important to all who study the Eastern tongues, and to those who desire to maintain or to augment the literary reputation of our nation.

The condition of oriental MSS. in England is not satisfactory, or encouraging to the scholar. In the catalogue of Dr. John Leyden's books, which had been purchased for the library at the India House, was a copy of the *Ramayana*; when Mr. Lassen was in London, he was not allowed to collate it, because, as we are informed, the books had not yet been unpacked. A learned foreigner is occupied in a literary work that can be undertaken only once in an age, and is for the benefit of all nations and for all time; he visits England in search of materials to render the result of his labours more perfect, he remains here for weeks, or for months, but he must return without the aid he sought, because the books he desires to consult are not yet unpacked; at the end of his visit, as at the beginning, he finds that the wished-for MSS. '*nondum e cistis exprompti erant, neque in bibliothecam curia Indicæ illati!*'

Of the British Museum, Augustus W. Schlegel says, that the Sanscrit MSS. there, with two exceptions, were of little value, and most of them were incorrectly described in the catalogue, '*plerisque in catalogis perperam notatos.*' His adventures at Oxford are so remarkable, that it is proper to relate them in his own words, which accordingly we will translate literally. 'I myself found, moreover,' he says, 'a tattered fragment of the last books of the *Ramayana* at Oxford, but it is worth while to relate how this happened. I was informed by the celebrated Charles Wilkins, that the Arabic, Persian, and Sanscrit books had been sent thither, which James Fraser collected in the East in the middle of the last century, and enumerates at the end of his life of Nadir Shah; and my learned informant assured me that he had himself seen them at Oxford about twenty years before. I wrote to Alexander Nicholl, a professor at Oxford; his answer was, that he knew nothing of those MSS.; if they ever were in existence, they had doubtless been lost long ago.' The learned professor of Oxford certainly speaks of the loss of MSS. quite as a matter of course: '*codices istos ipsi plane ignotos esse; si unquam existierint, sine dubio dudum deperditos.*' 'I consequently gave up almost all hopes of finding them,' Schlegel continues, 'nevertheless I went to the very famous seat of learning. I was kindly received by the celebrated Alexander Nicholl, whose recent death is a misfortune to Oriental literature; he conducted me to the Bodleian library, of which he then had the care, and showed me a single volume, containing some mythological fables and a medical treatise, and he declared that there were no other Sanscrit MSS. there. Notwithstanding his declaration, I relied upon the distinct and important testimony of Charles Wilkins, and persisted in urging and questioning him for some time, when he at last thought of the Ratcliffe library. He accordingly hunted out his colleague, the librarian of that collection, who well remembered Fraser's Arabic and Persian MSS., but as for the Sanscrit he had totally and entirely forgotten them. We commenced a diligent

search: at last we drew forth from a press, which had long been unvisited, the separate and torn portions of MSS., covered with dust and dirt, and leaves rolled up together promiscuously. Oh! what destruction did I then see! Nothing was ever scattered more confusedly from the Sybil's cave into every quarter of the heavens, when the leaves, on which she used to write her oracles, were carried away by a sudden storm. I was not able to examine them all, for I was in haste to return home, it being late in the autumn, and winter was approaching. I selected, however, from the midst of that disgraceful confusion a fragment of the *Ramayana*, and I put together almost the entire MS. of the poem "*de Crishni ἐπιφανείᾳ (Sri Bhāgavata-Purāna)*," and I re-arranged as many of the leaves as I could find in their order. I had already noticed the unusual antiquity of the writing, and I read with no small astonishment these dates at the end of the books, "Samvat, 1461—1463, i. e. A. Chr. 1405-7." The most ancient in the king's library at Paris is a MS. of the same poem, which was written sixty-five years after, "Samvat, 1528, A. Chr. 1472." The University of Oxford, therefore, although still ignorant of its wealth, possesses a MS. which is most rare and indeed unique in Sanscrit literature.'

These are the words of the learned A. W. Schlegel, and we prefer to leave them to our readers without any observation or comment. MSS. of even moderate antiquity are seldom to be found in India, for various reasons, and especially on account of the white ants: so destructive are these insects, that they will devour a considerable library in a few hours. To prevent their fatal ravages it is usual to soak the paper with a liquor, which, as A. W. Schlegel informs us, is impregnated with arsenic, or some other potent and deadly substance. This practice reminds us of, and gives at least some slight tinge of probability to, the well-known eastern story of a physician, or studious prince, who died suddenly from reading a poisoned book. It seems that the sad tale has had at least a due influence upon the professors and librarians at Oxford. Whilst the student, in his eager curiosity, rapidly turned over the close thin leaves with a moistened finger, he often placed it on his lips, and thus unconsciously conveyed the fatal poison to his mouth.

The narrative of the strange disorder of the Ratcliffe library brings to our recollection the animated and amusing picture which the enterprizing Anquetil du Perron has presented of his adventures, when he visited the University of Oxford in search of MSS. in the Zend or ancient Persian language, some years before Schlegel's pilgrimage to 'the very famous seat of learning.'

### POLAND.

**STATE OF EDUCATION OF THE KINGDOM OF POLAND, AS IT WAS LAST YEAR.**—The University of Warsaw, founded by the Emperor Alexander in November, 1816, and substituted for that of Cracow, (the latter city having been separated from the kingdom) consists of five faculties: theology, (of the Roman Catholic faith,) having six

professors ; law and administration, having eight professors ; physics and mathematics, ten professors ; medicine, ten professors ; literature and arts, fourteen professors. The rector and the elders of each faculty compose the council of internal administration. The university reckoned 300 students the first year of its foundation, and it counted 750 in 1830. The prizes consist of valuable gold medals. There are also an observatory which has cost 800,000 florins, a botanic garden, containing ten thousand plants, a zoological cabinet, a museum of ancient and modern works of art, medals, minerals, &c., and a public library, containing 150,000 volumes.

Besides the university, there are in Warsaw four lyceums or colleges, having 1613 pupils, a preparatory school, five schools for the Jews, a Roman Catholic seminary, a school for midwives and matrons, a school for the deaf and dumb ; also several military schools, such as one of the cadets at Kalisch, that for engineers and artillery, one for ensigns of infantry, and one for sub-lieutenants of cavalry : there is a school for the construction of roads and bridges, one for the forests, one for agriculture, and one for the mines.

There are also eleven palatine schools distributed among the various palatinates or provinces, besides district schools in the country ; also elementary schools for children of both sexes, and Sunday-schools for the instruction of mechanics.

In all the kingdom, out of a population of about four millions, there were last year 1756 professors or teachers, 29,750 male students, and 11,157 female pupils.

A committee of public instruction had the superintendence of all these establishments, examined the candidates, books, &c.

There were, in the city of Warsaw, twenty-eight journals, newspapers, and reviews, including daily, weekly, monthly, and quarterly publications. There was also a newspaper published in the chief town of each palatinate.—*Dr. Badecki's Statistical Tables. Warsaw, 1830.*

*Note.*—The above is from an Italian Journal : what follows is from a different source.

In the exposé presented by the Polish minister of the interior to the Diet of last year, it is mentioned that the *females*, who are intended to take the charge of boarding schools for those of their own sex, receive such instruction as may qualify them for the various grades in those establishments, under the direction of commissioners, specially appointed for that purpose. We observe, on the same authority, that the sum annually assigned for the furtherance of public education, is about two millions of florins, independently of one hundred and sixty thousand bestowed in aid of indigent scholars. The number of students at the university of Warsaw last summer was stated by the minister as being 589 ; and the whole of the Polish youth, educating in the high schools, as amounting to 8682. He likewise remarked, that, although the elementary schools had experienced a decrease of five and thirty in their number since the year 1823, the scholars had actually increased, and that they might be estimated at an average of 28,000 per annum.

## DENMARK.

Mr. Abrahamson communicated to the conductors of the Bulletin des Sciences Géographiques, &c. an account of the progress of mutual instruction in Denmark, from 1823 to the end of 1829, from which the following tabular view is taken.

	On Dec. 31, both Years.		On Dec. 31, both Years.		
	1823. 1829.		1823. 1829.		
	Schools.	Schools.	Schools.	Schools.	
The army had . . . . .	19	30	Brought up . . . . .	164	1023
Copenhagen, the city . . . . .	8	29	Aabourg . . . . .	6	145
the province . . . . .	11	106	Vibourg . . . . .	30	160
Fredericksbourg . . . . .	9	91	Skanderbourg . . . . .	8	84
Holbek . . . . .	6	79	Aarhus . . . . .	0	56
Soroe . . . . .	44	78	Randers . . . . .	16	141
Proesto . . . . .	6	84	Samsø and Veile . . . . .	4	100
The islands Bornholm, { Maribo, Als, Æro . . . . .}	5	103	Ringkjobing . . . . .	1	195
Odensee . . . . .	7	130	Ribe . . . . .	10	224
Swandbourg . . . . .	6	94	Duchy of Sleswick . . . . .	0	226
Hjoring . . . . .	1	79	Duchy of Holstein . . . . .	0	135
Thisted . . . . .	42	112	Duchy of Lauenbourg . . . . .	9	1
Carried forward . . . . .	164	1023	Iceland, Ferroe, and } the Colonies . . . . .	0	24
				239	2814
In preparation for the year 1830, { new schools to the number of }				300	
					2814

## RUSSIA.

PRIMARY (NATIONAL) SCHOOLS IN RUSSIA.—Advices from St. Petersburgh, of the 19th of February, mention, that 'the Emperor had just given his sanction to certain regulations, which the minister of finance had laid before him, providing for the establishment of primary schools in the several villages appertaining to the crown. The object of these seminaries is to diffuse useful knowledge among the peasantry, and to furnish the villages with individuals who may act as writers. Gratuitous instruction will be afforded in these schools to youths of not less than eight years of age, in catechism, reading books and written documents, writing, and the first four operations of arithmetic. The lessons are to open after their return from labour, and continue until it be resumed: with the exception of Sundays and festivals, they are to occupy four hours per diem. Permission is, however, given to the teacher to assemble his pupils, for the purpose of repeating their lessons, even whilst they are working in the fields; but this cannot take place without the assent of the villagers. The expenses of

these schools are to be defrayed out of the territorial income of the villages; and the first essays are to be made in the governments of St. Petersburg and Pskov.'

### SOUTH AMERICA.

The Greek Professorship in the University of Buenos Ayres is abolished, as not a single pupil has devoted himself to the study of the Greek language since the opening of that University.—*Allgemeine Schulzeitung, Darmstadt.*

### UNITED STATES.

PENNSYLVANIA.—The following facts are taken from an article in the *Darmstädter Allgemeine Schulzeitung*, and were communicated by a German teacher resident in Pennsylvania. Some of them, no doubt, will be new even to many Americans, who have had no opportunity of being acquainted with the German population of Pennsylvania:—

'When a schoolmaster's place is vacant, an election is made from among the candidates by the twelve elders of the church and the preacher. The candidates are examined on a Sunday in the church, and required to give specimens of their skill in singing, and playing on some musical instrument. At the close of the service the preacher and elders, after a few minutes' deliberation, choose one from among the candidates, who is appointed for one year; the engagement can be terminated on either side by giving a quarter's notice before the end of the year. A piece of land is assigned to the schoolmaster, and some are found kind enough to give him a little corn to plant it with. He also gets money at the rate of a dollar per month for each pupil, but this only during the months when the children actually frequent the school. Before opening his school (which is at Christmas) the poor master goes round to solicit for scholars, but this degrading practice is not attended with much success. Some of the inhabitants, who are far from the school-house, will join among themselves and hire a schoolmaster for a few months for their own use. This master is boarded and fed by the subscribers in turns. The regular schoolmaster finds other rivals also among the perambulating adventurers who are found in all parts of the U.S. Some parents trouble themselves very little about sending their children, or they take them from school, if there is the least cause of complaint against the teacher, and sometimes without any cause at all. Wie kleichscht tu tem Schulumäschter? "How lik'st thou the schoolmaster?" the father or mother asks the child: or, Wie oft hast tu auk'sagt? "How often hast thou read?" If the answer is not satisfactory, the child is usually not sent back. The schoolmaster consequently can never reckon on the number of his pupils. The teacher who gives this information lived in a district which could have furnished one hundred scholars, but from the beginning of December to the end of March he had generally only

twelve or sixteen, and only on one day as many as twenty-one scholars. Most of these were from sixteen to twenty years of age, and yet could not read. With the smaller children the master sometimes receives instructions how to teach them ; the following elegant letter of Jacob Lüscher may serve as a specimen of their epistolary style :—

“ An Hernn schulmeister ich las euch wiesen das ihr tie kinter die schreibicher aufsagen solt und das allen Tag das sie die Buchstaben Leren duen—und kinter Last aufsagen eins nach dem andern und last sie nicht alle auf einmal brillen, wie die schw. Von Mir Jacob Lüscher.”

The school education is generally limited to learning to read ; very few are taught writing and arithmetic. To explain or understand what is read forms no part of the plan : religious instruction also is not given in the schools. The consequence of all this is a degree of rudeness and ignorance among a large part of the German population which is almost incredible ; and though they have the advantage over their European brethren in their houses, clothing, and the general comforts of life, they are far behind them both in their manners and moral cultivation.’

These remarks will apply not only to the German population of Pennsylvania, but also to a large part of the Germans who inhabit Virginia west of the Blue Ridge. Education is not the fashion among them, and at present they find that they can do without it.

BOSTON.—The governors of Harvard University, near Boston, in the U. S., adopted a few years ago a plan for procuring books for the University Library, which is somewhat different from the mode in which eleven of our libraries in Great Britain are provided with books. A circular was addressed to the friends of education, to authors, and others, requesting them to present a copy of any work they might publish to the Library of Harvard University. The names of all donors are to be registered in a book, which will always be kept open in the library.

There can be no doubt that such an appeal must have been successful. Those who can afford to give a book will be happy to have the opportunity. In England an act of parliament exacts eleven copies of each book that is published ; and what is more, several of the libraries which receive them are as little accessible to the public in general as if they were in Siberia.

### EGYPT.

An official newspaper, of a folio size, consisting of four pages, is now published at Cairo, by order of Mohammed Ali, Viceroy of Egypt. This gazette is printed both in Turkish and Arabic. It contains the political regulations of the governor, the most remarkable events that take place in Egypt, a list of the vessels that arrive in and leave the Egyptian ports, and generally such intelligence respecting the agriculture and commerce of the country as it is useful to know. The thermometrical and barometrical observa-

tions made at Cairo are regularly recorded in this gazette. As specimens of what it contains, we may give the following samples.—The council of state has abolished the punishment of death in Egypt, except for political offences. For other offences compulsory labour is the punishment, which varies in length according to the nature of the crime. Some numbers of the gazette contain the prices of all the commodities imported into Alexandria. In the forty-sixth number there is a very interesting report on the arseual of Alexandria.

It is clear from this statement, that Mohammed Ali neither wants capacity to conceive nor energy to execute important measures for the improvement of the country. But the present condition of the people is not favourable to promote his views; and, indeed, his own policy in some departments of government frustrates all the good that might result from his wise regulations in others. Mohammed Ali has the sole monopoly of all European commodities introduced into Egypt; and what remains of the native population is kept in a condition of degrading slavery, deriving no benefit at all from the improved resources of the state.—*Bulletin de Féruſſac.*

#### JAMAICA.

JAMAICA ITINERATING LIBRARIES.—‘The plan of itinerating libraries was introduced into East Lothian by Mr. Samuel Brown, Haddington, about thirteen years ago; and it has been attended with a degree of success which is unexampled in the history of reading associations. The East-Lothian libraries commenced with five divisions of fifty volumes; they now consist of upwards of 2000 volumes, which are arranged in divisions of fifty. These divisions are stationed in the towns and villages of the county, and exchanged every second year. The regular removal and supply of new divisions has excited and kept up such a disposition to read, that in several stations frequently there is not a book left in the library. To persons acquainted with the issues from stationary libraries, of thirteen years’ standing, of 2000 volumes, or even of a much smaller number, the following statement will appear almost incredible:—The issues of books at Haddington to subscribers have been nearly eight and a half times for every volume per annum. The gratuitous issues at Haddington have been seven and a half times for every volume; at Gifford, Salton, Aberlady, North-Berwick, Belhaven and Spott, they have been seven times every volume; and the issues of the books of the whole establishment, so far as reported, has been five times every volume per annum; or 10,000 issues of the whole. If the whole had been arranged in stationary libraries, there is reason to believe, that the issues, thirteen years after their establishment, would not have amounted to 1000 per annum.

‘Mr. Brown having proved the efficiency of the plan at home, and being desirous to prove its suitableness for the colonies, has, with the assistance of the Scottish Missionary Society, the London Traçt

Society, and several Jamaica proprietors, sent out four divisions of fifty volumes, to be placed under the superintendence of the Rev. Mr. Blyth, Hampden; Rev. Mr. Chamberlain, Port Maria; Rev. Mr. Watson, Lucea; Rev. Mr. Waddell, Cornwall.'

The above is part of a printed notice of what are called 'itinerating libraries.' The design is good, and no doubt its success has fully equalled the expectations of its zealous promoter. There is added to this notice a list of the books in the Jamaica north-west district. Among them there are, in our opinion, very few calculated to be really useful to the poorer classes of any community; and how the negroes of Jamaica, for whom we presume the books are mainly\* intended, can derive benefit from such works as Russell's Tour in Germany or Doddridge on Regeneration, is far above our comprehension.

#### NEW SOUTH WALES.

**SYDNEY.**—A college will soon be established at Sydney, New South Wales, for the education of the youth of this distant colonial possession of Great Britain. The following authentic particulars will be interesting:—

Some influential inhabitants of Sydney have sent as agent to this country the Rev. Dr. Lang, with powers to make such arrangements as may be best adapted for the establishment of the new college. Dr. Lang has been favourably received by the heads of the colonial department, who have also issued an order from the colonial office for a loan to be furnished out of the colonial treasury of Sydney in aid of the undertaking.

Dr. Lang has engaged four gentlemen to conduct the different departments of education in Sydney College. The classes with which it will open are—1. A class of geometry and experimental philosophy. 2. A class of practical mathematics, embracing writing and arithmetic. 3. A language class, in which the Latin and Greek languages will be taught. 4. A class of English literature or belles-lettres. Besides these classes, Dr. Lang proposes to found a theological lectureship, which, however, will not be supported by the college funds. These classes, it is supposed, will be found sufficient for the wants of the colony at the commencement; but in course of time, a class of mental philosophy will be added, comprehending the principles of jurisprudence and political economy. The gentleman who has the direction of the language class has undertaken to make preparation for this important class also. To insure a supply of students well qualified for the college, it is the intention of the professors to establish subsidiary schools in Sydney, from infant schools upwards, to be conducted by competent teachers, either native or emigrants.

The funds granted as a loan to Dr. Lang are not available till his return to the colony, which appears to us to be an injudicious

\* It is stated that 'no books of an immoral or irreligious tendency, or such as are calculated to excite any disturbance in the island, shall be sent out.'

arrangement on the part of the authorities at home. The agent will thus be prevented from procuring, during his stay in London, such books and apparatus as are absolutely essential at the opening of a new college.

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## B R I T I S H.

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OXFORD, JAN. 27.—In a convocation held this day, it was agreed to accept the bequest contained in the will of the Rev. Robert Finch, M.A., of Balliol College.

### COPY OF THE BEQUEST.

'I give and bequeath all my books, manuscripts, statues, busts, bas-reliefs, bronzes, medals, coins, gems, prints, pictures, and drawings, unto my secretary, Henry Mayer, a native of Leghorn, in Tuscany, for the term of his natural life; and it is my will, and I do direct the said Henry Mayer to make a full and true schedule or inventory of my said books, manuscripts, and other things, so given and bequeathed unto him for his life, as aforesaid, as soon as may be after my decease; and to sign the same and transmit it unto Thomas Webster, Esq., of Queen-street, Cheapside, London, attorney-at-law. And at the decease of the said Henry Mayer, I give and bequeath my said books, manuscripts, statues, busts, and other things, unto the University of Oxford, upon condition that the whole be kept separate from any other collection, and be called and named "Finch's Collection," and be deposited in the Ashmolean Museum, or, if there be not ample space therein, in some other convenient building, where visitors and students may have access thereto. And in order that the aforesaid collection may not be deteriorated by neglect, I give and bequeath from and immediately after the decease of the survivor of them, my said wife Maria Finch, and the said Henry Mayer, unto the warden of New College, the Master of Balliol College, the President of Trinity College, and the Keeper of the Ashmolean Museum, and to their successors in office for ever, all my monies vested in the 3½ per cent. South Sea Stock, the yearly interest of which I enjoin shall be divided into two equal portions, of which one moiety shall be employed in maintaining and preserving the collection, and the other moiety in purchasing useful objects to increase the same.'

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The following new endowments have been made in this University during the last few months:

1. A Professorship of the Sanscrit Language and Literature, and two Scholarships (of 50*l.* each) in the same language, with a reversion of a sufficient sum to found two more; by the late Joseph Boden, Esq., Colonel in the East India Company's service. Candidates for the professorship must be matriculated members of the University

in some college or hall thereof, and above twenty-five years of age. The right of election is vested in the Chancellor, Masters, and Scholars in Convocation assembled, by whom the selection of a fit person is committed to the Vice-Chancellor, the Regius Professor of Divinity, and the Regius Professor of Hebrew. The professor is required by the regulations of the endowment to deliver, even to one student, at least forty-two lectures yearly; and for every omission of a lecture he is to forfeit 10*l.*, and on the omission of one-third of his yearly number to be dismissed from his office. The election of the first professor is fixed for March 15, 1832. In the term immediately succeeding this appointment, regulations for the scholarships will be made.

2. Hebrew Scholarship.—Mr. Pusey, the present Regius Professor of Hebrew, his elder brother, and Dr. Ellerton, Fellow of Magdalen College, have each given 1000*l.* to found three scholarships for the promotion of Hebrew literature, tenable for three years; one scholarship to be filled up yearly after due examination. The scholarships are open to under-graduates and bachelors of any college or hall. A certain residence and attendance on the professor's lectures are the conditions of holding these scholarships.

3. Kennicott Hebrew Scholarships.—Mrs. Kennicott, widow of the celebrated Hebraist, Dr. Kennicott, late Canon of Christ Church, has left her estates in Norfolk to be sold, to found two scholarships, open to all Bachelors of Arts of the first year, of any college or hall in Oxford; to be elected by the Professor of Hebrew and two other examiners to be appointed by the Vice-Chancellor, and to be tenable for four years. No regulations are yet made respecting the conditions of residence, and the time of election.

4. Mathematical Scholarships.—The Chancellor of the University, several of the colleges, and many resident and non-resident members, seeing the want of some encouragement to the study of mathematics at Oxford, have subscribed to found three scholarships of 50*l.* each; one to be vacant yearly; and the candidates required to have passed their examination for the degree, but with no other qualification. The first election will take place in the summer term.

#### **PRIZE SUBJECTS FOR 1831.**

Chancellor's Prizes—the first of which is open to under-graduates and all who have not exceeded four years from matriculation; the other two, to those who have exceeded four, but not completed seven years, and have not taken the degree of A.M. or B.C.L.

1. *Latin Verse*.—Numantia.

2. *English Essay*.—On the Use and Abuse of Theory.

3. *Latin Essay*.—Quænam fuerit Oratorum Atticorum apud Populum Auctoritas.

Sir Roger Newdigate's Prize for Under-graduates.

*English Verse*.—The Suttees.

Dr. Ellerton's Theological Prize of 20 guineas for Bachelors who have not exceeded their twenty-eighth term from matriculation.

*English Essay*.—The Evidence deduced from Prophecy in Support of the Truth of Christianity.

FEB. 23.—The number of Determining Bachelors for this Lent, that is, from Shrove Tuesday, 1830, to Shrove Tuesday, 1831, is 280.

CAMBRIDGE.—*Bachelors' Commencement, Jan. 22, 1831.*

MODERATORS.—James Challis, M.A., Trin.; James Bowstead, M.A., Corpus.

EXAMINERS.—William Henry Hanson, M.A., Caius; Joshua King, M.A., Queen's.

WRANGLERS.—Earnshaw, Joh.; Gaskin, Joh.; Budd, Caius; Worledge, Trin.; Mills, sen., Pemb.; Amphlett, Pet.; Peill, Qu.; Paget, Caius; Whytehead, Joh.; Meller, Trin.; Smith, Sid.; Willan, Joh.; Cheadle, Qu.; Sheppard, Trin.; Rigg, Caius; Bates, Corpus; Oliver, Pet.; Mills, jun., Pemb.; Paton, Trin.; Entwistle, W., Trin.; Blakesley, Trin.; Otter, Chr.; Degex, Jes.; Winter, Corpus; Walker, Chr.; Bacon, Corpus; Hildyard, Clare; Nash, Trin.; Geary, Trin.; \*Harrison, Caius; Hoare, Joh.

SENIOR OPTIMES.—Delamare, Caius; Dawes, Corpus; Colville, Trin.; Tyrrell, Joh.; Whiston, Trin.; Ross-Lewin, Cath.; Ventris, Qu.; Nicholson, Joh.; \*Bonnin, Qu.; Mann, Joh.; Dixon, Corpus; Owston, Qu.; Stanton, Chr.; Bullock, Clare; Swann, Emm.; \*Dashwood, Trin.; Favell, Qu.; Hockin, Pemb.; \*Thompson, Trin.; Proctor, Chr.; Stoddart, Corpus; Minty, Caius; Klanert, Pet.; Pickwoad, Pet.; Harman, Caius; Rogers, Trin.; Thomson, Jes.

JUNIOR OPTIMES.—Venable, Emm.; Bainbridge, Cath., and Cockerton, Joh., eq.; Whittington, Pemb.; Wallace, Trin.; Gaskell, Corpus; Kennedy, Trin.; Fell, Pet.; Sharples, Emm.; Shadwell, Joh.; Johnstone, Caius; Stacye, Chr.; Fleming, Pemb.; Street, Qu.; Power, Joh.; Blane, Trin.; Jerwood, Joh.; Spedding, Trin.; Vawdrey, Joh.; Walsh, Trin.; Selwyn, Joh.; Evans, Qu.; Foster, Trin.; Chatfield, Trin.; \*Morgan, Trin.; Fosbrooke, Trin.; Yellowly, Trin.

\* Those gentlemen whose names are preceded by an asterisk (\*) have one or more terms to keep previous to being admitted to their degrees, although they passed their examination in the above order of arrangement.

*Cambridge, Jan. 15.—Lent Examinations.*—The following will be the subjects of examination in the last week of the Lent Term, 1832:—1. The Gospel of St. Mark. 2. Paley's Evidences of Christianity. 3. The Third and Fourth Books of Xenophon's *Anabasis*. 4. The First Book of Virgil's *Georgics*.

*The Seatonian Prize.*—The subject of the poem for the present year is, 'David playing the harp before Saul,' 1st Sam. vi. 23. The Examiners have given notice, that should any poem appear to them to possess distinguished merit, a premium of 100*l.* will be adjudged.

CLASSICAL TRIPPOS, 1831.—*First Class*—Ds. Kennedy, Trin.; Selwyn, Joh.; Blakesley, Trin.; Johnstone, Caius; Walsh, Trin.; Chatfield, Trin.; Hore, Joh. *Second Class*—Ds. Whiston, Trin.; Minty, Caius; Spedding, Trin.; Worledge, Trin.; Shadwell, Joh.; Whitehead, Joh.; Sheppard, Trin.; Venable, Emm.; Dashwood, Trin.; Harrison, Caius. *Third Class*—Ds. Fell, Pet.; Dawes, Corpus; Evans, Qu.; Vawdrey, Joh.; Swann, Emm.

MARCH 3.—The Rev. Thomas Jarrett, M.A., Fellow of Catherine Hall, was elected Professor of Arabic, in the room of the Rev. S. Lee, B.D., now Regius Professor of Hebrew.

The following appear to be the numbers of the members of the two Universities for the year 1830:—

OXFORD.—Members of Convocation, 2510; members on the books, 5259.

*Cambridge.—Members of the Senate, 2179 ; members on the books, 5263.*

**NATIONAL SCHOOLS.**—The nineteenth report of the ‘National Society for Promoting the Education of the Poor in the Principles of the Established Church,’ presents what is stated to be a complete account of the schools of the Union. ‘It appears that 2609 places have schools directly or indirectly connected with the National Society, of which 2595 are daily and Sunday, and 1083 Sunday schools, for children of either sex. Of these, the places which have made returns within the last two years amount to 2571; and it is only necessary to add a proportionate number of children for the extremely small remainder from which no account has been obtained, in order to show the total number of children receiving instruction in schools so connected. By this mode of computation it appears, that there are 123,182 boys and 93,389 girls receiving daily instruction, and 67,101 boys and 62,106 girls taught on Sundays only; making a total of 345,778 children educated in National Schools,’ being an increase of 8379 children during the past year. The Society is now instituting Inquiries, by means of queries addressed to the incumbent of every parish and chapelry in England and Wales, to ascertain the progress of education and the state of Church of England schools, without reference to union with the National Society. The result of a similar inquiry, made in the early part of 1828, was as follows:—8899 schools, containing 278,699 boys and 271,739 girls; total 550,428 children.

**BRITISH AND FOREIGN SCHOOL SOCIETY.**—This Society, the object of which is to promote the daily instruction of the children of the poor of every class and sect, in the elementary branches of education, and in moral and religious principles, state, in one of their recent reports, that their exertions in establishing schools abroad have been eminently successful, extending now not only to nearly all the countries of Europe, but to Greece, India, South Africa, and America, both North and South. In almost every county of England, ‘schools have been established, by means of which upwards of fifty thousand children are now receiving daily instruction in the Scriptures. The British schools of England, formed in connexion with the parent society, have been the means of affording education to nearly a million of children; and upwards of seven hundred teachers have been trained for the responsible offices of British school-masters or mistresses.’ The training of masters and mistresses has always been a main object with the society: for this purpose a model school is maintained in the Borough-road, in which five hundred boys and three hundred girls are constantly in a course of education. The state of the school and the conduct of the children are described as highly gratifying. The method of education is on the Lancasterian system. The Society have also published the following plan, extracted from ‘Hall’s Plans for improving the Condition of the Poor,’ for estab-

lishing and supporting a school for elementary instruction ; which, as it contains much that may be generally useful, we here republish :

' Let a school-room be built, which may be done at about the following expense : for one measuring 36 feet by 20, with a cottage attached, about 250*l.*\* including every appurtenance necessary for commencing school, will be required. For one of 40 feet by 20, which will contain 160 children, 27*l.* has been found adequate. If funds cannot be obtained for building, let a suitable room be taken at a moderate rent, which may be procured for from 5*l.* to 10*l.* per annum. Let this place be fitted up with slates, desks, forms, and lessons, which will cost about 2*l.* A teacher will now be necessary, who may be procured from the British and Foreign School Society, and must be paid in the following manner : 25*l.* per annum salary (if a man), and 2*d.* per week from as many children as he can procure ; or 20*l.* per annum (if a woman), and the pence from the girls ; or if a boys' and girls' school should be required in the same place, an unencumbered married couple will be the most eligible, as about 30*l.* per year, with the children's weekly payments from both schools, will be found sufficient for their remuneration.

' It will readily be perceived, that by this plan a Teacher's interest and duty are united, and act reciprocally upon each other ; and so excellently has this plan been found to answer, that in *large* towns a school might easily be *made to support itself*. We will suppose a town, whose population will afford 250 children, to be without the means of raising annual subscriptions. I would suggest that a room be fitted up as before stated, and that the master be allowed, in addition to the elementary branches of education, reading, writing, and arithmetic, to teach geography, geometry, English grammar, and book-keeping, to those children whose parents might choose to embrace the opportunity, one hour after school-time each day, at an extra charge of 2*d.* weekly. About one-fourth of the children might be calculated upon, eager to avail themselves of this advantage, and thus a respectable income would be obtained by the teacher, without placing dependence upon annual subscriptions. It would stand something like this :—

	£. s. d.
200 children at 2 <i>d.</i> per week .....	1 13 4
50 children at 4 <i>d.</i> per week .....	16 8
	<u>2 10 0</u>

' From this money, the rent of the school-room being secured by the committee, the teacher ought to liquidate all incidental expenses (excepting firing, during the winter), and pay himself ; upon this plan a school has been lately opened in Bradford, Wilts, and succeeds beyond expectation.

' On the plan before suggested, schools have recently been established at the following places in Buckinghamshire and its vicinity : Aylesbury, Beaconsfield, Drayton, Chesham, Tring, Preston, Bisset,

\* A school of this description, built and fitted up for this sum, may be seen at Chalvey, near Windsor.

Chalfont, Wooburn, Denham, and Chalvey, near Windsor; as also several evening schools for adults, the whole containing upwards of 2500 pupils of both sexes.'

**SUNDAY-SCHOOLS.**—The last Annual Report of the Sunday-School Union gives the following summary of the returns of Sunday-schools in connexion with the society:—

	Schools.	Teachers.	Scholars.
Four London Auxiliaries . . . .	485	6,141	65,485
Great Britain . . . . .	6600	73,612	739,971
	<b>7085</b>	<b>79,753</b>	<b>805,456</b>

The Report also states 'the great and growing importance of the addition, as far as possible, of daily schools to Sunday schools. In many cases the same rooms would answer both purposes, and the weekly pence of the children would go far to pay the salary of the daily teachers. The attendance of the children would thus be better secured on the Lord's-day—habits of order would be formed—less time would be consumed in elementary instruction—and Sunday-school teachers would be enabled to direct their undivided exertions to promote the scriptural and religious instruction of the children.' For this latter purpose the committee report that they have requested some esteemed ministers to deliver lectures on biblical literature to the Sunday-school teachers, with a view to their improvement in Scriptural knowledge.

The books in general use in Sunday-schools have also, it is stated, been improved. A separate book for each of the three first classes of scholars has been compiled upon a new system of progressive elementary instruction, the peculiarity of which consists in a threefold exercise of reading, spelling, and catechising; and the plan is stated to have given general satisfaction\*.

**PROTESTANT DISSENTERS' CHARITY SCHOOL.**—This Institution was founded in 1717, for educating and clothing eighty boys and forty girls. Twenty supernumerary boys are admitted. The first school was erected in Bartholomew Close; but that building, a short time ago, was totally destroyed by fire. A new building has been erected in Jewin Crescent, containing a school-room for boys below, and an upper room for girls. The rest consists of suitable apartments for the master and mistress.

**SCHOOL AT DEVONPORT FOR ORPHANS OF SOLDIERS AND SAILORS.**—A meeting was held in the Townhall, Devonport, on the 24th

\* A correspondent, in reference to a quotation in page 17 of this Journal, No. 1, says, 'Sunday-schools have never professed to undertake the education of the lower classes of England. Their object is to give religious instruction, and they have given elementary instruction as a means of forwarding that object. But the teachers of Sunday-schools look forward with anxious desire to the period when the general diffusion of the elements of knowledge will enable them to devote the whole of the time, which they spend with the children, to the imparting religious information exclusively.'

January last, at which it was resolved to establish a school for the instruction of the orphans and children of soldiers and sailors in that neighbourhood, of whom it was stated there were not less than six hundred destitute of the means of acquiring instruction. This object it is proposed to accomplish by a subscription of 4*s.* per annum, each subscriber having the privilege of nominating a child.

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**KILDARE STREET SOCIETY.**—The annual general meeting of the ‘Society for Promoting the Education of the Poor in Ireland,’ was held on the 2d of February, at the school-house in Kildare Place, Dublin, at which a very voluminous report was read. It contained strictures on the report of the select committee of the House of Commons; and stated that though the Society had been compelled to refuse seventy-six applications for aid in consequence of their limited funds, yet 160 new schools had been added during the past year, making a total of 1634. Since the commencement of the Institution, 132,530 children had been educated by the Society, a large proportion of whom were Roman Catholics. The report also states the issue of books, since the Repository opened, to be 1,406,990; and that there are 1037 lending libraries, the number of volumes applicable to this department being 100,747. The annual expense for each pupil in the model school is 2*s.* 5*d.*; for model teachers, 9*l.* 5*s.*

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**GAELIC SCHOOLS.**—The Aberdeen Chronicle of January 29 gives the following instance of the efforts occasionally made in the middle or lower classes to secure instruction for those connected with them. ‘We understand that the treasurer of the Society for the Support of Gaelic Circulating Schools in the Highlands and Islands of Scotland has lately received, in aid of the funds of that highly useful society, from Serjeant Major Campbell, of the 78th Highlanders, the sum of 10*l.* 12*s.* 8*d.*, being the amount of a collection made among the non-commissioned officers and privates of the service companies of that regiment, now stationed at Kandy, island of Ceylon. This is the second collection from the same regiment, within these two years, the former having amounted to 17*l.* 17*s.* 7*d.*’

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**BRISTOL COLLEGE.**—On Monday, January 17, the Bristol College, situated in Park Row, was formally opened, on which occasion the members of the council and other gentlemen assembled, and the officers of the institution were introduced to the pupils, thirty-four in number. Dr. Carrick, the Chairman, addressed the company, and the pupils in particular, in an eloquent speech, detailing the advantages of education, and recommending to them attention and exertion at present, as the means of securing their advancement in life, and future happiness. In the evening a public dinner was given, at which Dr. Carrick presided.

On Thursday, February 24, the first annual general meeting of the subscribers to the Bristol College was held in the premises

appropriated to the purposes of the institution, at which the report of the council for the past year was read. After congratulating the subscribers on the success of their efforts, and trusting that at no distant day a more capacious building would be required than the one they now occupied; they added, that the council, unwilling to forego, 'for the sake of any new experiment, however plausible, the solid and sure advantages which were to be obtained from the results of long experience, had resolved to found their new course of instruction upon the system of education, improved as it had been from time to time, which was followed in the two universities of this country.' The appointment of Dr. J. H. Jerrard to the office of Principal is then noticed, as also the effective co-operation and superintendence of the Rev. W. D. Conybeare. The total number of students whose names were already entered on the College register, amounted to forty-two, and many more were shortly expected. The report also stated that the receipts, it was confidently believed, would very soon support the annual expenditure, so that what might remain unpaid on the shares, would be available to the erection of a more spacious building when circumstances required. Two hundred and thirty-five shares, it was stated, had been taken, upon two hundred and ten of which the instalment of £1. per share had been paid.

The following appointments have been already made in this Institution:—

Visiter and Superintendent of College Examinations, Rev. W. D. Conybeare, A.M., F.R.S., F.G.S., &c. &c.; Principal and General Superintendent of the College, J. H. Jerrard, D.C.L., Fellow and Classical Lecturer of Caius College, Cambridge; Vice-Principal and Professor of Mathematics, Charles Smith, B.A., of St. John's College, Cambridge.

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**CITY OF LONDON LITERARY AND SCIENTIFIC INSTITUTION.**—On the 2d of March a general half-yearly meeting of the members of the City of London Literary and Scientific Institution was held at the Theatre, in Aldersgate Street. The report stated that the Institution was prospering, and that the classes for the study of languages, as well as their library, their lectures, and their reading-room, were all increasing in attraction. The reduction of the stamp-duty on newspapers and advertisements was also alluded to, as being calculated to promote the diffusion of knowledge, by lowering the price of books, in which the expense of advertising forms a considerable item.

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**BRISTOL PHILOSOPHICAL INSTITUTION.**—The eighth annual general meeting of the Bristol Philosophical and Literary Institution was held on the 10th February. The report stated the prosperity of the Institution, detailed the various acquisitions which their museum and collections of art had received, and enumerated the different lectures that had been delivered during the past year. The report concluded

by ascribing the present gratifying state of the Society not merely to the zeal and liberality of its members, or to the public interest excited by its lectures, but to the increased taste for intellectual pursuits, together with the concord which united the various committees in a zealous co-operation for the attainment of the important ends for which they were associated.

**MECHANICS' AND APPRENTICES' LIBRARY.**—At Liverpool there is an establishment called the Liverpool Mechanics' and Apprentices' Library. On February 14th the seventh annual report, drawn up by D. Gladstone, Esq., chairman of the committee, was read by him. The report gave a rapid retrospect of the formation and history of the Institution ; and stated that the library, from very slender foundations, fostered and augmented by donations, together with the purchases made with the funds supplied by contributions of the subscribers, had arrived to a degree of magnitude claiming a prominent place among those institutions of which Liverpool might be justly proud. The catalogue lately printed exhibits a collection of three thousand five hundred volumes, containing a mass of instructive and entertaining knowledge which would not disgrace libraries of much higher pretensions. The total number of readers is stated to be from nine hundred to one thousand, and the deliveries of books out of the library during the past year, to amount to twenty thousand. The report also remarks that 'works of biography, voyages and travels, and general history, particularly such as illustrate the state of the world in modern times, and more especially of Europe, are amongst those most prized by the generality of readers ; also such treatises as those published by the Society for the Diffusion of Knowledge, particularly in the department of entertaining knowledge.'

**EDGBASTON SOCIETY.**—The Edgbaston (Warwickshire) Society for Mutual Instruction and Assistance was established at the beginning of the year 1815—a time when a very numerous class was in a state of the most abject degradation both morally and physically ; when the great and general distress following the war made application for parish assistance so much a matter of course, that few ever thought of their loss of independence in becoming regular paupers. Another circumstance which, to persons of an advanced age, created much mental debasement and positive unhappiness, was their vast inferiority to the rising generation, who were generally educated at Sunday or weekly schools. The leading object of the first promoter was not merely to educate, but likewise to afford the labouring class an opportunity of regaining their self-respect and social feeling by conferring, at the same time that they received, a benefit. Agricultural labourers and farmers' servants were accordingly invited to meet for two hours every Sunday evening, and were taught to read and write. The more proficient were required to assist the ignorant ; and it was stipulated that each individual should pay

one penny a week into a general fund appropriated to such cases as might arise among themselves of sickness and distress. Those who met together very soon amounted to thirty, which is rather under the present average number. During the first seven years teachers were constantly employed, but this practice is no longer requisite, and they have latterly depended on each other for improvement. Men of all ages are admitted : father and sons are frequently seen together ; and the funds of the society have often-times relieved the families and assuaged the sufferings of hard-working members, whom sickness, the infirmities of age, or the severity of the times have reduced from comparative independence to a state of wretchedness and want. At an annual meeting the necessary rules are made and a committee chosen to regulate the affairs and manage the finances of the society. The amount of the receipts has hitherto proved more than amply sufficient for its original purpose ; and at the expiration of fourteen years, after distributing among the members more than half the accumulated surplus, after supporting their own distressed, and extending their bounty even to strangers, enough remained to furnish them with books, and to answer every demand they might reasonably anticipate.

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**SOCIETY FOR THE RELIEF OF GOVERNESSES.**—On Monday, Jan. 5, a numerous and respectable meeting was held at Edinburgh for the purpose of establishing a Society for the Relief of Governesses and Female Teachers in sickness or in advanced age. The Rev. Dr. Inglis, in addressing the meeting, dwelt on the great importance of the class of persons whose respectability would be thus increased by holding out inducements for properly qualified persons to devote themselves to the purpose of instruction, and remarked, that society could scarcely expect that due care would be taken of the young, if those to whom their education was committed should be abandoned in the hour of sickness, or when too far advanced in life to perform their accustomed duties. A committee was appointed and measures taken to carry the purposes of the meeting into effect.

#### POPULAR LECTURES.

A very remarkable circumstance in the present diffusion of knowledge is the general establishment of Mechanics' Institutes, Literary Societies, and courses of popular lectures. In the *Metropolis* these have become so numerous as to defy enumeration ; but the following notices may serve to give some idea of the extent to which the system is carried in the provincial towns.

At the second anniversary meeting of the *Newport Pagnel* Mechanics' Institute, held on Jan. 12, the Report stated, that

' Your committee have the pleasure to report that, during the last year, seventeen lectures have been delivered to the members, exclusive of those by Mr. Buckingham, on the manners and customs, &c., of the inhabitants of Palestine. The first lecture was given by Mr. Daniel, on popular anatomy ; the second, on hydrau-

lies, by the Rev. T. P. Bull; three lectures, delivered in February by Mr. Hemming, on chemical affinities and the chemical properties of the atmosphere; these were followed by Mr. Christie, who delivered three lectures on astronomy; two lectures were delivered, in October last, by Mr. Josiah Bull, on geology; three lectures, by Mr. Sampson, on electricity, galvanism, and pneumatics; and one, by your secretary, on the manners, customs, and history of the ancient inhabitants of Great Britain.'

At *Manchester*, since the 1st of January last, lectures have been delivered by Dr. Warwick on chemistry; by Mr. Nicholson on the steam-engine; by Mr. Thelwall on Elocution; by Mr. Buckingham on India; by Dr. Carpenter on the powers of the mind, with an especial view to education and self-culture; and by Mr. Giles on astronomy.

At *Chelmsford*, Mr. Neale has given lectures on geology, and many fossils collected from the adjacent parishes were exhibited.

At *Newark*, Mr. Potchett, a schoolmaster of Snenton, has given a series of lectures on astronomy, the whole of the mechanical apparatus, as well as the geometrical figures, used in illustration, being of his own construction. Mr. Potchett having, in the course of his lectures, expressed a hope to witness the establishment of a Mechanic's Institute, a schoolmaster in the town immediately offered the use of a room, and a small society was formed, the first meeting taking place on New Year's Day.

At *Leeds*, Mr. Addams has lectured on music and acoustics; Mr. Keir on geology and astronomy; and Mr. Lockwood on the steam-engine.

At the *Hull* Literary and Philosophical Society, a paper was recently read by Dr. Longstaff on medical education, in which he stated that 'the great progress of improvement among the lower ranks rendered it necessary that the intelligence and information of the higher classes should keep pace with it, and this was most particularly applicable to the medical profession.' He then proceeded to give an outline of what he considered as necessary to the education of a medical professor, and earnestly recommended the establishment of local schools of medicine in all the large towns, with a medical library and museum attached. The experiment, he said, had already been tried with success at *Leeds*, *Birmingham*, *Manchester*, *Bristol*, and other populous places.

The preceding list of popular lectures in the provinces might easily be very greatly extended, but we have selected sufficient to show the growing importance of this system of general instruction, especially as applied to adults. Subjects that have hitherto been thought too abstruse or too uninteresting to form any part of the knowledge of the tradesman and mechanic, are now explained in a manner intelligible and attractive to all.

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## N O T I C E.

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It will of course be their duty not to sanction anything inconsistent with the general principles of the Society. Subject, however, to this general superintendence, they feel that the objects of the Society will be better forwarded by placing before the readers of this work the sentiments of able and liberal men, and thus enabling them to form their own conclusions, as well from the difference as from the agreement of the writers, than by proposing to them, as if from authority, any fixed rule of judgment, or one uniform set of opinions. It would also be inconsistent with the respect which the Committee entertain for the persons engaged in the preparation of these papers, were they to require them strictly to submit their own opinions to any rule that should be prescribed to them. If, therefore, the general effect of a paper be favourable to the objects of the Society, the Committee will feel themselves at liberty to direct its publication: the details must be the author's alone, and the opinions expressed on each particular question must be considered as his, and not those of the Committee. As they do not profess to make themselves answerable for the details of each particular essay, they cannot, of course, undertake for the exact conformity of the representations which different authors may make of the same facts; nor, indeed, do they, for the reasons already given, feel that such conformity is requisite.

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THE  
QUARTERLY  
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---

ON UNIVERSITY EDUCATION.—OXFORD.

(Continued from No. I.)

IT is very difficult to convey to a stranger an accurate idea of Oxford as a place of education. Its institutions are many and various, owing their origin to different periods; and as, in some cases, they have been applied to the purposes of education in a way never contemplated by the founders, the whole no more resembles a regularly planned university, than some venerable château, converted into military quarters, would resemble the barracks which an engineer would project. Some of the most honourable and best appointed portions, perhaps, are those which, in their original design, were appropriated to subordinate uses; whilst others that were once conspicuous—the state apartments as it were—have become, in many instances, mere appendages, preserved chiefly for their antiquity, and the prescriptive right of being there.

One, especially, who has been familiar with a foreign university alone, is perplexed by the very prepossessions he has thus acquired. He hears, for example, of numerous *professorships*, and concludes that to these he must direct his attention, in order to ascertain the source and machinery of instruction; because, in foreign universities, professors are the chief instructors. The mention of college tutors, perhaps, comes across his view of the professorships, and adds to this false impression respecting them, by producing a confusion of thought between university and college offices. Then he hears of public examiners and masters of the schools. —What are these? Accounts of lectures meet him in every stage of inquiry, and here is confusion worse confounded. A lecture, in the original and ordinary meaning of the academical term, signifies something *read*. Most of the Oxford lectures are totally different things: whilst some again are, strictly speaking, such didactic discourses as were called lectures in earlier times, and are still so called in those uni-

versities which retain that form of instruction exclusively. He is told, perhaps, that the university lectures are principally of the one kind, the college lectures of the other ; but this explanation only plunges him once more into his original confusion between college and university. Attempt to explain the office of college tutors, and it is ten to one that he blends your description with that of a numerous class, sanctioned, indeed, although not recognized by Oxford—the *private tutors*. The difference between the *collections*, or *terminal* examinations, established by each separate college and hall, and the *public* business of the schools, is, in like manner, explained, only for the explanation to be again and again called for, in reply to some new form of question, until the *cicerone* gives up all hope of conveying, and his charge of carrying away, any accurate impressions, unless both are blessed with more than an ordinary share of patience and zeal in imparting and acquiring information. No one, in short, who has not had to ‘lionize’ a Swede or a German, whose stock of English words and English ideas just serve him to pick his way through a social chit-chat, can be aware how the aggregate difficulties, of which only a small portion have been enumerated, baffle the officious kindness of those who undertake to place before him an intelligible outline of an English university system. But all this takes place, though in a minor degree, if the stranger is an Englishman not brought up at Oxford or Cambridge.

The best mode, perhaps, of so directing the inquiries of a stranger, whether English or foreigner, that he may avoid all this perplexity, is to state, in the first instance, what is meant by *the university*, what by a *college* or *hall*—one of those societies, or separate schools of education, which, all combined, form the university. The statement of this is simple enough. Oxford is, in fact, an establishment for purposes of *education*, which corresponds to a federal body united for *political* purposes. As, in this latter case, the several States have separate jurisdictions, separate duties, and, to a certain extent, separate interests, so the several colleges and halls which compose the academical body—the united colleges—have each its own private rules and regulations for the education of its members, but combine all, as a body, to contribute to that which is the university education. Each separate society may particularly encourage some particular branches of learning more than another, or may convey its instruction by a different method ; but all look to that qualification which is agreed on by all as the object of the united body—the university.

In the next place, let it be understood that it is in the

course of study thus sanctioned and required by the *university*, and not in the course adopted by any colleges separately, that the *Oxford education* properly consists. The establishment of such a system of training as is requisite for the first degree is, in fact, that which constitutes Oxford a *university*—that is, a place of *education*, as distinguished from a mere place of study. If (to be more explicit) Oxford afforded all the *facilities*, which it now does, for learning the ancient languages and the various branches of elegant literature and science, and tutors and professors gave separate testimonials of proficiency in the several branches, the value of these testimonials would be quite distinct from that which is now claimed for a degree-testimonial. They would imply no more than proficiency in certain studies specified by the several certificates. What an Oxford degree now indicates is, that the graduate is instructed, not specifically in this or that particular branch of knowledge, but *generally*. In other words, it is not a testimonial of attendance on particular courses of teaching, but a testimonial of having received that instruction which, taken altogether (*in universum*), constitutes, according to the decision of Oxford, an educated man. This, at least, is the case with respect to the degree of Bachelor of Arts, which is, accordingly, the main degree to be contemplated in taking a survey of the university education. There are likewise, it is true, degrees in the several faculties, of which some notice will be taken presently; but these (with the exception of the degrees in music) *presuppose the university education* to have been attested by the previous step of B.A., or (what amounts to the same) by testimonial for it.

It is obviously, then, the key to the whole inquiry into the Oxford education to know what it is that the university, *as such*, requires—what are the subjects of its public examinations, how they are conducted, and what proficiency entitles the candidate to a degree, or to some class or mark of distinction higher than the mere degree. Next, and in connection with this, we should examine the plan of instruction which the several colleges adopt; this latter being necessarily shaped in reference to the public examinations. Under this twofold division, then, of Public Examinations and College Preparation, the details which we are about to give of the Oxford system of education will be arranged. But before we enter on these details, we must draw the reader's attention aside for a moment to some features in the scene, which it will be more convenient for him to notice at once.

Oxford we compared, in the opening of these remarks, to some antique edifice, parts of which have been converted to uses not contemplated in the original building. This is a

pretty correct representation. In its early constitution, and in the gradual additions which for many ages were made to the great machine of public education, the model now exhibited in the universities of Germany, for instance, was kept in view. Thus professorships, or readerships, in the different arts and sciences were established; and these, together with some of more modern date, although no longer the main sources of instruction, are, in many instances, very efficient, especially in respect to those branches of study which are excluded from the requisites for a degree. Such, for example, are the professorships of Hebrew and of chemistry. At the same time, the object which the university now accomplishes by means of these professorships, as well as by the public honours and rewards for particular branches of knowledge, independent of the degree-examinations, falls under the view of *facilities* afforded, *encouragement* given to study, but is no part of its system of *education*. One who gains a prize, or who profits by attendance on the chemistry lectures, is honoured by the university, and has derived instruction provided by the university, but neither the acquirement nor the mark of distinction reckon towards his degree. His testimonial of having been educated by the university, and of having satisfied the university of his proficiency as one of its educated members, is quite another thing. In short, the account of what Oxford does in this way, makes part of the answer to the question—What *may* a student learn at Oxford? But the information respecting the degree-examinations and the method of preparing for them, is the reply to the question—What *must* a student learn in order to be educated at Oxford?—What is required in order to obtain from the *degree-examiners* either a bare testimonial or a place of honour? Many of the *facilities* and *encouragements* of particular branches of knowledge do, however, harmonise with and advance the *system of education*, as will appear from the following statement of them.

The prizes, for example, are given for the encouragement of composition, in prose and in verse, in Latin and in English; and proficiency in all these points enters into the qualification for the simple degree or the honorary degree \*. These prizes are annual, and five in number. There is one for the best English and another for the best Latin prose composition on a given subject, and a third for the best English essay on some theological question. These are restricted to Bachelors of Arts, or at least to those of standing for that degree, and not beyond that standing. There are two more, one for the

\* By this name, for want of a better, we denote a degree accompanied with an honourable distinction. It is sometimes called simply 'obtaining a class.'

best copy of English verses, the other for the best copy of Latin verses, on a given subject ; and these are restricted to under-graduates, or rather to those who are not yet of standing for their degree. All the subjects are proposed in June or July, and the decisions take place in the May of the year following. The successful compositions are then recited by the prizemen at the commemoration, or great annual festival in act-term, which closes the academical year, and is followed by the summer (or *long*) vacation.

There are also public scholarships, which operate in a similar way, as *rewards* and *encouragements* of general proficiency or particular acquirements. Of these the Vinerian, or law scholarships, are conferred by the votes of convocation, in reference to general merit ; whilst the Ireland are adjudged, by a board of examiners specially appointed, to the best candidates, after a strict examination in Greek and Latin scholarship. The Craven scholarships, again, are, with some restriction in favour of founder's kin, bestowed on classical merit. There are likewise scholarships for Hebrew and others for mathematical proficiency, both of which will probably produce as marked effects on these respective studies as the Ireland scholarships have on philological pursuits. These, however, are but newly instituted, and not yet, indeed, brought into operation. For the Hebrew the university is indebted principally to its present liberal Regius professor; the others have been established through the joint contributions of colleges and individuals.

Together with these *encouragements* which stimulate to study, the university affords *facilities* for the acquirement of various branches of knowledge, as well of those which do not, as of those which do, enter into the qualifications for a degree. The several professors of geology, chemistry, and many other subjects excluded from the public examinations, are always provided with a class, often with a numerous one. Nor are the professors of those branches, which the university includes among the studies for its first degree, necessarily unemployed. It may seem at first sight, indeed, that the demand created by the public examinations would operate on these especially ; even as a Hebrew scholarship must increase the Hebrew professor's classes by exciting numbers to the study of that subject. But this is not altogether the case. The demand for instruction that is created by the degree-examination is met, almost exclusively, by lectures delivered in the several colleges and halls, or rather by private college and hall *tutoring* ; so exclusively, indeed, that although some knowledge of Greek is essential for any degree, and a considerable pro-

ficiency for the higher class degrees, the Greek professor has no lectures. On ancient history, indeed, and on moral philosophy, the respective professors do deliver regular courses of lectures; nor are the indefatigable exertions both of the Regius professor of Divinity and of the Savilian professor of Geometry, superseded by the circumstance that each separate college provides lectures on these subjects.

For all further information respecting the professorships, public scholarships, prizes, and other endowments, which we have classed under the general description of *encouragements* and *facilities* for learning, we refer the inquirer to the Oxford Calendar, and proceed to the main point—the statement of those studies which the university requires that its educated members should have pursued—the proficiency in these necessary to entitle the candidate to his testimonial of education—the method adopted for ascertaining this proficiency—and, lastly, the mode of training the student for his examination.

The present examination-statute requires that the candidate for the degree of B.A.—the *education* degree—should display some acquaintance with the facts and doctrines of the Christian religion, and especially with the peculiar tenets of the Church of England, as set forth in its articles—some proficiency in the Greek and Latin languages—in one or more of the ancient philosophical treatises, or, in lieu of this, in a portion of ancient history—some knowledge, also, either of the elements of logic or of the elements of geometry.

For the mode of ascertaining the requisite proficiency in these several points, the examiners are left, in the main, to their discretion. Some specific directions, however, are given. The candidate must be tried in translating from the original language of the Gospels. His acquirements in Latin and Greek must be proved by examination in at least three different authors; of which, however, the historical or philosophical work, in which he is examined as to his knowledge of ancient history or philosophy, may make one. It is further required specifically that part at least of this examination should be conducted orally, and that the examination in religion should be, in part at least, always so conducted. The main object contemplated in this latter rule is to familiarise the future candidates with the test to which they in turn must be subjected. It has also an obvious tendency to stimulate and control the proceedings of the examiners themselves, by bringing them more immediately under the inspection of the university at large. And hence, with a view to prevent the system from sliding at any time into a mere secret tribunal,

every candidate is obliged to present a certificate of having been present throughout one day's examination ; and so strictly has this regulation been enforced, that, although it has formed part of the statute for nearly thirty years, only one dispensation has been granted, and that under the express understanding that it was not to be converted into a precedent. At the same time, the principle on which it is founded cannot be said to be universally approved. The benefits of having part of the inquiry, at least, oral and public, are too obvious indeed to be altogether overlooked ; but objections are still raised by some, on the ground of the greater facility with which a mere paper system might be conducted.

So much, then, of the detail of examination is specified ; but by far the greater part is left to the discretion of the examiners, and not a little in practice to the option of the candidates. The examiners are entrusted with the adjustment of the standard of proficiency, and with the further process of ascertaining this proficiency in each case by means of translations, particular questions, and other modes of trial both oral and in writing. The candidate, again, is permitted to name his books, subject, however, to the approval of the examiners, who are, besides, left at liberty to examine *any* candidate in whatever classical authors they may think fit. The following may serve as a specimen of the ordinary lists admitted by examiners—Logic ; Virgil ; Cicero de Officiis ; the five latter books of Herodotus ; Porson's four plays of Euripides.

The above statement applies to those candidates who aim at no more than barely to satisfy the requisitions of the statute. The statute, however, contemplates a much higher standard of qualification as always likely to be exhibited by a portion ; and for these it provides, accordingly, honours additional to that of a mere degree, and gives directions respecting the award of such honours. It provides, for example, that the names of those who are found deserving of these extra honours should be printed, arranged in four classes ; not, indeed, on a principle of mere relative merit as displayed at each examination, but according to a fixed standard of merit for each class : it may, therefore, happen, and has actually happened, that either a higher or a lower class should be vacant. The names in each class are arranged alphabetically. It has repeatedly been proposed to alter this part of the system, by arranging them in order of merit ; but a considerable majority has always been opposed to this change. In favour of it, it has been urged that candidates of very unequal merit are often placed in the same class,

without any mark of distinction between them. To this it has been replied that the same objection, virtually, would lie against the other plan also; since the first man, one year, would perhaps be hardly equal to the second or third of another year. But the objection altogether seems hardly worth considering; since if A. and B. are each excited to *do their best*, though their ultimate attainments be unequal, the object we have in view is accomplished.

It may, however, sometimes happen that a man of very superior powers will relax his exertions when he has made sure of a first class, because he can rise no higher; whereas, if the order of merit were adopted, the fear of a rival would keep up his efforts. It is, however, no common case for a man to have attained the security here supposed: on the other hand, it might often happen that a man of superior powers would be withheld altogether from being a candidate for honours, if he doubted or despaired of *standing first*.

On the whole, the fairest statement, perhaps, of the two plans is, that the one tends to raise emulation to the *highest pitch among a few*; the other to *extend its influence to the greater numbers*. It is we presume from a preference of the latter object that the present plan has been retained.

In ascertaining the qualifications for these several classes, the examiners are left, as is reasonable, very much to their own methods of inquiry, the specifications of the statute on this head being, for the most part, specified permission to use their discretion in cases which might admit of its being questioned. They are, for instance, expressly permitted to call on the candidate for honours to illustrate his several subjects of examination, by reference to modern literature. As to these subjects, however, there is one restriction peculiar to the examination for the classes—the candidate is not allowed, as in the case of a mere degree, to substitute anything else in the place of a system of logic.

The mention of the discretionary power of the examiners suggests the notice of other things concerning them:—their number, mode of appointment, and respective duties, as well as of the arrangements adopted by them, under the direction or permission of the statute, for conducting the examinations.

The total number for the classical and mathematical departments is seven. They must be approved in convocation, and none are eligible who have not attained the degree of M.A. or B.C.L. Twice a-year, in the Michaelmas and Easter Terms, they are engaged in their duties. These commence with a division of the candidates; all such as are supposed, from the lists of books they present, not to be candidates for

the first three classes, are summoned first into two separate schools, in which all the examiners are indiscriminately employed. The qualifications for the mere degrees and for the fourth class of honours being thus decided on, the examiners then separate into the respective schools to which they are elected—three to the mathematical school, and four to the school of Literæ Humaniores ; and the candidate for extra honours is then examined in one or the other, or in both, according as he aims at a classical or mathematical class, or at both.

It would be impossible to convey by a description any exact idea of the proficiency requisite either for the mere testimonial, or for the several stages of further distinction. Some notion may, however, be formed of it from the materials of examination and the exercises performed. A specimen list of the books of the least ambitious candidates has already been given. For the highest honours in classes, the catalogue usually comprises two or more treatises of Aristotle, with the addition occasionally of some of Cicero's, or some parts of Plato—Herodotus and Thucydides, and often the whole or part of Xenophon's Hellenics, and Polybius—a selection of Greek plays, and sometimes Pindar—a portion of Latin history, most commonly two decades of Livy—two or more Latin poets, which are almost always either Virgil, Horace, Lucretius, or Juvenal. Besides the actual examination which the candidate undergoes in these books, he has exercises to perform in English, Latin, and Greek, in prose and in verse, at the discretion of the examiners.

The mathematical examinations have been, for the last three or four years, conducted principally by means of printed questions, answered in writing. The extent to which these go, and to which the candidate for a first class must have pursued the subject, may be stated generally as follows :—  
I. The elements of analytical geometry and trigonometry.  
II. The differential and integral calculus and its applications, to the extent comprised in the treatise of the Savilian professor of geometry. III. Mechanics, as in the treatise by Mr. Walker of Wadham, which includes the principles of its application to the solar system, embracing the *substance* of the three first sections of Newton's Principia, which are also read in the original forms. IV. The principles of hydrostatics, optics, and plane astronomy ; but the questions in these last sciences are not considered of such essential importance as those in the former. Part of Bland's Hydrostatics, Wood's or Coddington's Optics, and Maddy's or Brinkley's Astronomy are usually read.

It will be evident, even from the statement that has been given, that the examination, whether for a mere degree, or for the extra honours of a class, is very far from being, according to a vulgar notion, an examination only in the Latin and Greek languages. It is true that some acquaintance with these languages is a part of the requisite knowledge, and that great proficiency in them is encouraged and rewarded ; but not without reason ; for, independently of a knowledge of Greek, at least, being necessary for the study of the New Testament—independently, too, of the manifest advantage of studying the principles of grammar by a comparison of other languages with our own, these particular languages are the vehicles of such instruction as might indeed be conveyed through modern authors, and in our own tongue, but which would not, in many respects, be so advantageously conveyed. In the formation of the student's taste, for example, by directing him to dwell on the specimens of ancient classical poetry, and other elegant literature, the models proposed to him may be inferior, possibly, to the models furnished by modern literature ; but still, supposing this so, the classical models must always be better for the purpose, simply because they exhibit to him a *fixed standard of taste*. Were the literature of the Greeks and Romans less excellent than it really is, the circumstance of Greek and Latin being now dead languages—being no longer subject to the fluctuations of caprice and fashion—and thus affording a steady object for the student's mind to contemplate, is an advantage which would still entitle it to preference for the purposes of education. It is a question of the same kind, as whether a young artist shall be taught by being set to copy objects in motion or objects at rest.

These languages, again, are the vehicles of the most important historical information ; and although it may be urged that the student may, with a saving of time, acquire the same through translations, or be better employed in making modern history his prime study—on the other hand, the utility of having gone through the experiment, as it were, of actually examining *some* of the ancient records, for the greater part of which he may, perhaps, nevertheless be content to derive his information from others, is not to be lightly regarded. The student is required to learn the ancient languages, not merely indeed for the purpose of reading ancient history in the original authors, but of applying it to this amongst many important purposes ; and this application of it places him in as different a position, with respect to those portions of ancient history which he may learn from modern authors, as

he is who reads a description of experiments made in natural philosophy, after having witnessed experiments, compared with one whose *only* knowledge of such experiments has been obtained from written description.

Again, viewing the Oxford examinations as tests, not of particular branches of knowledge, but of *an educated man*; and considering, likewise, that one indispensable requisite of this education is a knowledge of the Christian evidences, there is a propriety in the study of ancient *heathen* ethical writers, rather than of the modern systems of Christian philosophers, which should not be passed over. The student of Christian evidence is instructed to rest the claims of the Gospel religion partly on the purity of its moral teaching. Now to send him, at the same time, to Christian writers for that view of ethics by which he is taught to try the Gospel morality, would be in great measure to nullify the evidence. As it is, besides the intrinsic value of such a treatise as Aristotle's *Ethics*, for example—besides the salutary exercise of mind which the accurate study of it involves—the heathen writers' views bear witness to the claims of Christianity—the heathen *book* to the New Testament.

In the course of these statements, occasional allusion has been made to changes which the examination statute has recently undergone, and to others of no very distant date. It may appear from this that the university is, and has long been, labouring under all the evils of a shifting system—that the students must be for ever doubtful and insecure of the objects they are to aim at; and that the perpetual attempts at correction and improvement constitute a greater defect than any to be remedied by them. This, however, is very far from being the case. The new statute of 1800 did indeed introduce an entirely novel system. But the condition of Oxford then greatly needed this wide departure from the existing course; and this very necessity arose from the previous neglect to make *gradual* alterations, so as to keep pace with the changing character of the university. But even this statute, by being allowed due time for coming into operation, occasioned no great inconvenience either to candidates or examiners. Since that period, however, the alterations have not been alterations in the principle or general tenor of the examinations, but in the details—in such points as can never have perplexed or disappointed any candidates who were regularly preparing themselves in accordance with the then existing statute; and, however slight these alterations may have been, some interval has always been allowed to elapse before they have been brought into actual operation.

The last changes, for example, were agreed on in convocation 1830, and were not acted on until the Easter term of the present year.

Of these last-mentioned alterations no more need be said than that the main object of them was to facilitate the process of examination ; and that, in pursuance of this object, the examiners have been allowed, in several respects, more discretionary power. The necessity of some change had become more and more pressing, in consequence of the difficulty there was to procure examiners for the Literæ Humaniores school ; and the changes in the statute may be considered as an experiment, adopted principally with the view of obviating this difficulty by lessening the demand on the time and trouble of those examiners. Whether it will accomplish this, is even now, however, a question with many whose practical experience of the schools entitles their opinion to regard ; and, accordingly, whilst these changes were under discussion, many printed papers were circulated, which, however at variance with one another, indicated a pretty general mistrust of the efficacy of the scheme that has been adopted.

We fear we have been tediously long on the subject of the examination for the degree of B.A. Its importance, however, as the main-spring of the Oxford system of education, has induced us to dwell on it more at large than will be requisite in the sketch which we shall next give of the degrees in the higher faculties, as they are called, before proceeding to describe that training for the public examinations, which takes place in the several colleges and halls ; for the degree of Master of Arts is at present obtained without any examination or exercise whatever. This, though by most good judges acknowledged to be a defect, is one for which no remedy has yet been suggested, likely to meet with general approbation. But we are decidedly of opinion that *no* degree whatever should be conferred on any one, except as a testimonial of some kind of proficiency in *something* exhibited by the candidate.

The degrees in the higher faculties, that is, the degrees of Bachelor and Doctor in Divinity, Law, and Medicine, are no further connected with education than as they may be considered in the light of encouragements and inducements, which the university holds out for the attainment of a certain proficiency in the several studies to which they refer. They can hardly, however, be regarded even as producing any results in this way ; and are, in fact, the relicts of an earlier system of education which has long since been abandoned. At the time when these gradations of literary rank were esta-

blished, and for so long as they served the purpose designed, they marked the progressive steps which the individual made in the several kinds of learning. The university then undertook, not merely the office it now assumes of educating and preparing one to *enter on* any professional study, or to mix in the polished ranks of society, but beyond this to provide *professional instruction*—to instruct for the professions of divinity, of law, and of medicine\*. The Master's degree, which was as now a necessary preliminary to the divinity and medical degrees, at least, was the point of general education, from which the student was supposed to diverge into some particular path of professional or other pursuit. The exercises and tests of proficiency in these higher departments were then uniform with those employed for ascertaining the qualifications of candidates for the degrees in arts, and consisted of public disputations and *opponencies*, in which the candidates displayed their acquaintance with the subject by controverting the positions of each other, and by replying to such questions as the graduates, in their respective faculties, chose to put to them during the period of their trial. What was the form of public examination naturally became also the mode of training for it; and it is not long since, in one college at least, divinity exercises were kept up according to the old forms. Such then being the familiar practice of the university, in respect of its students of all denominations and of all its different degrees, the candidates came prepared, by uniform training, from their degrees in arts to this mode of examination for a degree in the higher faculties; and such, we believe, is still generally the case, or very lately was, in some foreign universities. But the form of examination for the degrees in arts having been changed, the change naturally produced a revolution in the system of training throughout the university; and the exercises for the higher degrees have thus become unsuited to the preliminary education—unconnected with the previous habits of study and examination to which the candidate has been accustomed. One of two results was necessary—either that the exercises for the degrees in the faculties should be commuted for some method of examination harmonizing with the new system of teaching, or that the obsolete exercises should be regarded as mere forms, and the degrees conferred without reference to any proficiency made by the students beyond that of which they had before given proof for their degrees in arts. The

\* See No. I., p. 13.

latter has been the course hitherto adopted. In law and in medicine, the only requisite, beyond the degree of M.A., is the time during which the name of the candidate must be on the university register, and the discharge of the appointed fees. In the divinity school, indeed, an attempt has of late been made to render the old *pro forma* exercises a real test of proficiency; but even this has been done, not by the proper authority—that of the university—but by a private regulation of the Regius professor. Whether from unwillingness to encroach on the province of the university as a body, in so delicate a decision as that which determines who those candidates shall be on whom the university is to confer its theological degrees, or from whatever cause, this attempt, however, has not effected any essential departure from the old forms. The only change is, that the disputationes are in English, instead of being as heretofore in Latin; and that the objections and replies are made to be (as far as is practicable) the genuine questions and replies of the candidates, instead of a string of ready-made controversy, furnished by those who made a trade of these exercises, and transferred from one generation to another. It must be allowed, too, that whatever advantages this innovation may promise when contrasted with the degenerate practice for which it has been substituted, it is a form of exercise no longer in keeping with the main examination, and consequently with the early studies of the candidates. Independently of this, too, if it does operate in giving a new impulse and direction to the divinity studies of Oxford, it may be questioned whether the habit of looking to skill in religious *controversy* as the test of theological attainments—whether the necessity of every candidate, in turn, maintaining a *false* position—whether the injury which may sometimes be done to the vital truths of religion from the ill-matched powers of the disputants, and from the misapprehension or partial hearing of that large portion of the audience, the under-graduates—be not positive evils, greater even than the absence of any effectual test. It is highly probable, however, that this attempt of the professor to introduce some change—which must, at all events, be allowed as an evidence of his zeal and good intentions—may lead to some measures, on the part of the university, which shall do for divinity (perhaps, too, for law and medicine) that which has been already done for arts. Examiners will in time, perhaps, be formally delegated, and a system marked out by the university, for ascertaining, as in the case of degrees in arts, the requisite qualification of candidates for these higher degrees, which, if

understood by the public as expressing the decision of the university, ought not to be otherwise given. The present Regius professor having given, as he considers, a fair trial to the mode of procedure we have been describing, has laid before the university, we understand, a statement of his opinion as to the result ; and it is believed that he recommends an entire change of the system.

The degrees in music are an anomaly in the Oxford system. They are conferred without any reference to a previous degree, or examination for a degree in arts ; and are always preceded by a trial in the public schools allotted to this purpose. In speaking of these degrees as anomalous, we are far from meaning to imply any censure on a system of conferring degrees for acquirements not connected with or presupposing the course of university education. Indeed it might be desirable that many other branches of knowledge should be thus encouraged by Oxford ; and this might consistently be done, so long as Oxford combines with the office of accomplishing the educated man that of encouraging eminence in particular pursuits, and of advancing the pursuits themselves. Similar degrees might, with advantage to the university and to science, be granted for proficiency in mathematics, over and above the place which that study holds in the general system ; in which, though encouraged by honours, it is (very properly) not allowed alone to entitle a candidate to a degree in arts. Degrees might again be conferred in botany, chemistry, geology, and other pursuits ; and these degrees would, of course, as in the instance of those in music, be understood abroad as differing in their character and purport from those which imply the preliminary progress through arts.

We have now arrived at the most important part of our survey, and, at the same time, that which can perhaps be least understood from a mere description—the process by which each college or hall trains its members to undergo the test of being *educated*, in the university sense of that term ; in other words, the college preparation for the public examinations. It is this that really constitutes the Oxford education. The public examination is the *main-spring*, and the college exercises the *movements* of the great machine. It is to the former exclusively, it will be observed, that the university directs its attention, and very wisely. Once establish an efficient system of trying the qualifications of candidates, and the candidates will be sure, even of themselves, to find instruction. Let a university take care of its examinations, and the studies will take care of themselves. In Oxford,

however, that which would be less uniformly and judiciously, and certainly less easily, effected by the individual efforts of the under-graduates to obtain instruction and to qualify themselves for the public examination, is made the especial concern of each society in Oxford, which undertakes to provide its under-graduate members with this requisite preparation.

How is this done? Let the stranger to Oxford imagine a long table, spread with books, maps, or mathematical diagrams, as the occasion may require, and thronged with students, generally from the age of sixteen to twenty-one; and at the head of this class, (usually from five to fifteen in number,) a master of arts presiding, and conducting the business; and he will have before him a picture of the most essential and the every-day business of a college or hall—a college lecture. Every head of a house appoints a certain number of tutors for lecturing its own members. They are not, however, lecturers, in the ordinary signification of the word. We have seen in what the public examinations consist; and these college lectures are only the drill exercise and preparatory practice for them. If the subject of the lecture be a classical author, the several members of the class are called on in turn, to translate a portion; questions are put by the tutor, as occasion offers, and remarks are made by him, on points of grammar, philology, and criticism, as well as on the subject-matter of the book, whether it be history, philosophy, or poetry. At the same time, directions are given, as often as may be needful, respecting the mode of preparing for these lectures, the books to be consulted, method of analysing and illustrating, and the like. If the lecture be on any branch of mathematics, a similar process of putting questions, and giving directions, is pursued; and so also with respect to all other studies which are requisite either for a simple degree or for the further distinction of a class. By far the most usual, and also the most approved practice, is for each student to attend two, three, or even four tutors,—each lecturing in a different branch of literature or science; by which means one great advantage of the division of labour is obtained.

But the duties of the college tutor do not terminate with these class lectures. He from time to time has interviews with his pupils separately, for the purpose of ascertaining more exactly the individual's state of preparation for his public examination, consulting with him on the most effectual methods of removing his peculiar difficulties, arranging generally his plans of study, or directing his ambition to this or

that particular object. In doing all this, however, (which constitutes the province of a *tutor* as distinguished from a mere *teacher*,) the college tutors are not the sole labourers in Oxford. Although recognized neither by the university, nor by any particular college, as part of the Oxford system, a very numerous class has long existed in the university, who, under the denomination of *private tutors*, superintend and assist the studies of individuals. Without superseding or interfering with the operation of the college lectures, these are occupied rather in securing for the student the best use of those lectures, in so preparing him for attendance on them as to enable him readily to answer the lecturer's questions, and follow him in his remarks ; and in giving him assistance, perhaps, in those portions of his studies in which accident may have precluded him from receiving the assistance of a college tutor. These private tutors, therefore, although not necessary to the student's progress, nor universally resorted to, are still highly useful to several descriptions of students, but especially to that large class who come to Oxford insufficiently and partially prepared for entering on the studies of the place ; who have, in short, to acquire at Oxford, as well as they can, the greater part of what ought to have been taught them, and which their parents probably supposed them to have learnt, at school.

The course of college and hall lectures closes, at the end of each term, with a formal examination of each member, separately, by the head and tutors, who assemble for this purpose. This summing up of the business of the term is called, in the technical language of the place, *collections*, or *terminals*. The scrutiny occupies from two days to a week, according to the size of the college or hall. Each student presents himself, in turn, with the books in which he has been lectured during the term, and in many colleges, with the essays and other exercises which he has written, his analyses of scientific works, abridgments of histories, and the like. The main difference between one society and another in the mode of conducting the collections is, that whilst in some the students are required to present for their examination some book in which they have *not* received lectures during the term ; in others, the examination is strictly confined to a review of the business done at lecture, and under the superintendence of the college or hall authorities. Some colleges attempt to combine the two objects, by examining the students at collections, in any extra studies which they may have had leisure for pursuing, in addition to the lectures. It is obvious, that in those arrangements there are two different, and perhaps

discordant, principles acted on. The object contemplated in the collections which are confined to an examination of the student in the regular business of the term, is to secure from him a constant attention to the lectures, by the prospect of an examination in them being always close at hand. The exclusion of all, besides these lectures, from the subjects of the examination, makes this object the more sure, because it takes away the student's chance of making up for the neglect of them by the display of acquirements irregularly made in his private studies. This method, in short, is the most effectual for accomplishing one important object of college tuition—the student's adoption of the course marked out for him by his college. It forces him, by means of a moral restraint, into the college discipline, and checks that desultory and injudicious application of talent which young and ardent minds are so apt to make. It prevents the student from pursuing too exclusively the studies for which he may have the strongest inclination and the most decided turn, instead of submitting to be trained in such as are the more requisite for the formation of the intellectual character, from the very circumstance that the natural turn is not for these. On the other hand, the requisition of something more than the lecture-subjects of the term, or of something in lieu of them, is not without its apparent recommendations. It seems calculated to stimulate those who are qualified, by superior talent or preparation, to go beyond the regular routine of college business, which is of course marked out in reference to the average ability of the several classes—perhaps even lower than this—and thereby to make up for the apparent disadvantage of sailing, as it were, under convoy, and being occasionally obliged to *lie to* for those who are lagging behind, and detaining their free course. It would be unnecessary, after this statement of the different ends proposed in the two plans, and the means by which they are respectively pursued, to offer any opinion as to which is better.

Not the least important feature of college training remains yet to be noticed. It is the practice of writing weekly short essays on a given subject, occasionally interchanged with a copy of Latin verses, for those skilled in versification. The efficacy of this weekly exercise, as an instrument of education, must of course depend on the judicious selection of such subjects as may lead the student from the stringing together of phrases and common-place sentences to an actual discussion that is interesting to himself, and thence an exercise to his mind. Much, too, must depend on these essays being regularly returned to the writers, each with such observations

as shall not only form his crude opinions, but also point out his defects whether in matter or in style, and suggest the most likely methods of removing them; with nicely-measured praise also, and censure—at all events, with marks enough on each exercise to show that it has received an attentive perusal from the censor. Such is the plan pursued in those colleges and halls which estimate highly the practice of theme-writing; and all allow it at least a place in their system. In some, the composition is alternately English and Latin; in others, Latin alone. No one, however, but a witness, can be fully aware of the difference between the habits of composition acquired by men of apparently equal calibre, in the course of a few terms, according as the attention has been directed or not, to the discussion of subjects which really interest the writers, instead of vague commonplaces about abstract notions of virtue and vice, happiness and glory; and according as the writers have or have not received constant correction, encouragement, and advice, however slight—even if no more than enough to make them feel that they are writing to be read; that they are addressing themselves to one who will attend to them and reply to them, and that one a person whose remarks have the weight of authority.

In addition to these modes of direct instruction, which every college and hall appoints, the liberality of benefactors has provided them very generally with the means of indirectly promoting the studies of the place by premiums in the form of exhibitions, scholarships, and fellowships. As in the case of the university—the public body—of which each is a component part, the colleges are thus entrusted with the means of encouraging eminent acquirements; and, in some instances, as, e. g., in the instance of the Hebrew scholarships at Wadham, the encouragement extends to subjects that make no part of the necessary Oxford education. Many of these endowments, unfortunately, are hampered in their operation by some restrictions in the donor's will—by the scholarship or fellowship being confined to natives of a particular county, or even parish, or to those educated at particular schools; and although, in some instances, these restrictions have been relaxed, on the plea of compliance with the spirit of the bequest, yet they continue to form one of the main impediments with which the spirit of improvement in Oxford has to contend. These endowments are for the most part confined to colleges. The halls have no fellowships, nor are they corporate bodies; but some small exhibitions have been left to

some of them; i. e., to the university, for the benefit of members of this or that hall.

The mutual relation which has been now shown to exist between the public examination appointed by the university, and the instruction provided by the several colleges and halls, naturally leads us to one more inquiry respecting the Oxford system. As that system has been thus far represented, it appears that the university—the federal body—having to grant, as such, the certificate of education, assumes, as is reasonable, the province of deciding on the qualification of the candidates, and does not leave to each separate college the business of determining who of its members are or are not fit;\* but delegates the office of making the necessary scrutiny to public examiners. It might be expected, in like manner—as the matriculation of new members is an act not of the several colleges, but of the university, and as the enrolment of the name which entitles the member to the privileges of the university is made on the university register, and accompanied by certain public forums and requisitions—that the qualification of the candidates for *admission* would likewise be determined, not by the several colleges, but by the university that admits them; and that public examiners would be appointed to pronounce, in each instance, whether the candidate is so qualified. This is not, however, the case. Every college and hall examines, if it thinks fit, its own candidates for admission, and pronounces, each according to a standard of its own, on their fitness or unfitness for the university. At the same time, the university may be considered as interfering, in some degree, in these private decisions, by the appointment of a public examination called the *Responson*, for members who have been matriculated not less than six, and not more than nine terms—for members, in short, who have proceeded about half way in their progress towards that examination, which is to decide their claim to the testimonial of a university education. This examination, which is conducted by public officers called *masters of the schools*, is confined to a single Greek and a single Latin author, a portion of Euclid's Elements (not less than three books) and Logic, which may be either added or substituted for the latter. It is conducted, moreover, principally with a view to ascertain the *elementary* knowledge of the student,

\* New College is an exception to this rule, the fellows of it being examined for degrees by their own college. This apparent privilege is deeply lamented by many members of that college, as excluding the great majority from all chance of obtaining the principal university honours, and thus depriving them of all the benefits of emulation.

rather than his progress in those branches of knowledge which he is supposed to be pursuing—his preparation, in short, for the studies of Oxford, rather than his proficiency in them. This is indeed apparent from the restriction laid on the subjects of examination. Such an examination is plainly, therefore, no part of the test for ascertaining the qualifications of a candidate for a degree, but only of his fitness for pursuing those studies which are to qualify him : it is an inspection of the arms and accoutrements, rather than a review of the manœuvres in which the use of them is displayed. The *responsions* were substituted for some old exercises in the form of logical questions and *responses*; but are no otherwise connected with these forms, and are, in fact, so obviously applicable to the purpose which has been explained, that the previous existence of those old exercises, at that stage of the student's progress, requires to be stated, in order to account for these initiatory examinations taking place, not (as would seem natural) on the *admission* of a member, but from his sixth to his ninth term. It has accordingly been proposed by some to remove it nearer at least to the matriculation ; but the proposal has not hitherto met with the concurrence of the majority of the university. Some again have proposed to *divide* the *responsions*, keeping the scientific part of the examination—whatever, in short, relates to the studies which may be supposed to have been commenced *at Oxford*—where it now stands ; and to place earlier that more elementary grammatical examination for which the student ought to have been prepared at school. If this should ever be made to precede the matriculation itself, and to determine the admission of candidates to the privileges of the university, it would doubtless stimulate the schools throughout England in the same manner as the examinations for the degree have been found to act on the several colleges and halls in the university. Few will be hardy enough to maintain that such a stimulus is not needed.

As it is, our schools are exposed to the full force of a temptation which, more or less, besets every place of education ;—the temptation to neglect the great mass of the students, and bestow whatever pains *are* bestowed on a *few* who promise to obtain high distinction. To qualify one hundred youths to fill usefully and respectably their stations in some confined sphere is far more toilsome, and rewarded with far less credit in the eyes of the world, than to expend all one's care on one or two who are likely to make a figure, while all the rest are neglected. The excellence of any school is usually measured by the number, the absolute number, of

*prize-men or class-men, &c.,* that it has sent out, without any inquiry being made what becomes of nine-tenths of those (nominally) educated at it. Boasts of this kind might be met by the reply of Bias the atheist, to those who triumphantly showed him the votive tablets of those whom the gods had saved from shipwreck—‘Where are the pictures of those who were drowned?’

Schools, as we have said, are exposed to the *full* force of this temptation. In colleges it is checked by the circumstance that, as it is a credit for its members to gain honours, so it is a disgrace to have any of them altogether *rejected*. This tends to secure a due share of attention to the great mass of students; and the same advantage, in the case of schools, would be obtained by the proposed examination. It will be obvious that, in the foregoing survey, the university of Oxford has been considered solely under that one aspect which strictly comes within the province of this Journal—as a seat of education. Many topics, accordingly, of interest and importance—many, too, connected with the advance of science and literature, have been either omitted, or else slightly alluded to, for the sake of giving prominence to the main feature which we have been attempting to delineate. The influence of its libraries—its common-room society—its pulpit, might have been introduced, perhaps, not unsuitably into the account; as well as other matters more remotely affecting the intellectual character of the place. But enough has been probably stated to satisfy ordinary curiosity respecting the real state of its *education*, and the main instruments of it which are at work.

One statement further, however, it may be useful to make, respecting the *expense* attendant on this course of Oxford education. On no one point relating to the university is there so much misapprehension abroad. It is not uncommon to hear it asserted that an Oxford education costs the student from two to three hundred a-year, and in many instances considerably more. Now, it is very true that students *at* Oxford do often spend such incomes; but it is not the *education*—it is not the board and lodging, much less the instruction, and the privilege of keeping terms, that cost this. It is spent, whenever it is spent, in the indulgence of those habits for which parents are content that their sons shall pay, whether at Oxford or elsewhere—in keeping a horse, perhaps, dressing expensively, entertaining friends with breakfasts, or wine parties, with expensive desserts, and the like; not to mention the extravagance into which a heedless or ill-disposed young man is likely, in any place where he may be residing, to

carry expenses which a parent or guardian intends that he shall indulge in with moderation. All this is so far from being peculiar to the habits of the student at Oxford, *as such*, that as long as he is resident, he is subject to restraints on his expenditure, both from the university statutes and the surveillance of his particular hall or college, from which he is, of course, free elsewhere. The ordinary *college account* for the year, including university and college fees of all kinds, postage, boarding, lodging, washing, coals, and servants, oftener falls short of 80*l.* or 90*l.* than it exceeds 100*l.* The habits of the students are certainly more expensive than is convenient for all who might come, and who might afford to pay the necessary demands; but these habits do not arise out of the demands of the university or of the several colleges and halls.

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#### ON THE ENGLISH UNIVERSITIES.

By the late Dr. A. H. NIEMEYER\*, Chancellor of the University of Halle.  
(From Niemeier's Travels in England.)

WERE I asked the result of my opinions as to the comparative merits of the universities of England and Germany, after personal and local inquiries, I should be forced to acknowledge, that the longer I meditate upon the subject, the greater is the difficulty I feel in forming any accurate conclusions. The country itself, the national character, the future destiny and mode of life of the individuals who study in England, are so intimately blended with its systems of education, and present so dissimilar an aspect in the two countries, that an unconditional transfer of the schools or universities of either to a foreign soil, could never be recommended. I have also remarked, that among all classes in England, there is a considerable number of intelligent and scientific men who have never received a university education.

Those who are not blindly attached, as indeed too many of us are, to the pristine forms of German institutions, or are not so devoid of reflexion as to confound the jocund career of their academical years with the legitimate ends of scholastic life, will not fail, on an impartial review of the systems of Oxford and Cambridge, to acknowledge that they present, in many of their features, much that is estimable; nor will they be able to suppress a wish, that parts of them might be transplanted to our own schools. On the present occasion, I must, however, limit myself to a few brief observations.

\* These observations of Dr. Niemeier we think it better to give as they are, without comment, for the consideration of those concerned in English universities.

In the first place, I conceive it to be a great acquisition to the major part of those who have just quitted the school-room (some, indeed, at a very early period of life), that the prosecution of their studies under experienced persons is not suddenly checked, and that the acquisitions they have made in seminaries are not laid almost wholly upon the shelf by an instantaneous transition to the higher branches of science and learning. There is not one-third of *our* young academicians,—and I challenge any one to show that I have not even underrated the numbers,—there is not one-third of them who dream of a continued study of the ‘*Literæ humaniores*,’ than which there are no means so eminently calculated to exercise and cultivate the mental faculty; nay, there are but too many who consider it beneath them to retain even the possession of their classical books. Most of them float with the popular stream, which carries them away to prelections, the very name of which is—frequently beyond their comprehension; and, in this way, a youth of shallow parts or uncultivated understanding finds himself listening to subjects which the wisest of his companions is scarcely competent to digest. There are no regulations made to prevent him from entering on his academical career when unqualified; and indeed the veriest dolt never finds the door closed upon him.

In the colleges of an English university, the course of instruction has immediate reference to, and connexion with, that which obtains in the English schools, and the youth, though raised in rank, finds himself pursuing his former occupations. His mind ripens in the same soil which nurtured its first expansion, instead of being transplanted into a hothouse, where, though it may shoot up rapidly, it will too often bear no other fruits but those of empty and profitless acquirements. None but individuals, who, like myself, have passed a long series of years in close connexion with high schools, and have had a continued experience of academical examinations, can feel such deep reason for deplored that so vast a multitude out of the thousands, whom we have seen pressing forwards to their Alma Mater, should have taken part in prelections from which it was morally impossible for their minds to derive any salutary nutriment whatever. How few of them will suffer themselves to be advised to devote their first year to classical learning, or the lighter preparatory studies in philosophy! And, even were they inclined to listen to such advice, how few of them are there whose time—and much more whose pecuniary resources—would allow them to follow it.

This topic reminds me of another advantage peculiar to the English universities. Whatever may be the inequalities of condition among their frequenters, the most scantily provided student, excepting, perhaps, the class of *Servitors*, is by no means so entirely destitute of pecuniary means as the great bulk of our German academicians. In England, the mere pauper will shrink from the idea of entering upon collegiate pursuits, or, if he do venture to follow them, he is so liberally supported by the aid of rich endowments, that he is elevated far above the chilling poverty which humbles so many of *our* academicians to the dust, and leaves them often destitute of the commonest necessities of life. Though there may be instances in which these impediments and difficulties have been surmounted by strength of mind, extraordinary perseverance, an inextinguishable desire of knowledge, or consummate address and industry in profiting by every little advantage which has fallen across the aspirant's path, yet such instances of eminent individuals rising superior to the pressure of the deepest poverty, can only be regarded as exceptions to the general rule. On the contrary, if we contemplate those whose destination is to pursue an academical course under such circumstances, we shall discover that their poverty of spirit, their illiberality of sentiment, their coarseness of manners, their eagerness after some employment which may administer to their necessities, and their want of love or taste for science, are an inevitable consequence of the effect of abject poverty on the earlier years of education,—a poverty, which, in England, is deemed an insuperable bar to the dedication of a child to a learned life. I know that there are institutions, such as Christ's Hospital in London, where the poorer classes of boys, who possess eminent abilities, receive a scientific education. But such as these are so liberally provided for, that they cease to rank in the class of paupers from the moment they are elevated to a condition which enables them to look forward with certainty to the ease or affluence of laical or clerical appointments.

I remarked a *third* advantage inherent in the course pursued at the English universities during the first three or four years. It springs from that peculiar distribution of time by which many more hours are left for labour and composition in the privacy of the domestic study, than is the case with us. The English student is obliged to read, write, translate, and recollect much, independently of extraneous aids: hence, as he advances in years, he becomes familiar with the whole body and spirit of the ancient writers; which, in schools, are

seldom read or elucidated otherwise than by piecemeal. He is obliged to *work himself* (if we may use the expression) into an acquaintance also with the elements of history, mathematics, and philosophy. A variety of prizes for the best essays, discourses, and poems, serve also to keep alive a spirit of emulation; and he is under the necessity, moreover, of rendering an account of his labours. How seldom do such points as these receive attention under *our* system! Who is there that gives himself any concern about the individual industry of his pupils? Or how would such inquiries be practicable under the circumstances in which the German professor is placed? And how small is the number of those who frequent scholastic classes or repetitions! Amongst ourselves, the *industrious* are those who spend from five to seven hours a day in listening, and then writing down what they have heard,—too often, alas! under the pressure of disadvantages which are fatal to intellectual vigour or discernment. In this way, the impression made at one hour is obliterated by some totally different object presented in the next. As to any investigation of the subject lectured upon, or any attempts at essays or original composition, which give wings to reflexion, and teach youth to express their thoughts with ease and precision,—these are points with which none but the select few concern themselves. It must be evident, that such a system must overload and surfeit the strongest intellect, on the same principle that an exuberant sowing makes one germ choke another, and effectually prevents the single shoots from taking deep root, or ripening to a healthy maturity.

Yet, on the other hand, the English student exchanges the indisputable advantage of an animating and alluring delivery on the teacher's part, for the privilege of forming his *own* judgment, and being left at the mercy of his doubts and apprehensions. Mightily, indeed, has the 'life and soul' of men, who have proved themselves masters in their peculiar department, transfused itself at all times into the breasts of their crowded auditories; and happily, indeed, has the breath of this spirit survived in after hours. The disciple has borne an indelible mark of the school in which he has been formed: for the master-mind is always the creator of a school. Is it necessary to point at such scholars as Wolf, Kant, Heyne, Morus, or Ernesti? But, in England, it is only at certain intervals that some eminent professor, such as a Lowth or a Blair, comes before the public with a series of profound and finely-wrought essays. This is the whole extent of his exertions; and with them terminates his short-lived course. It

were well if many of *our own* classes went beyond the mere drawl and whine of reading and dictation !

There are many objects of lecturing altogether neglected in England. In this department the German university has decidedly the advantage ; nor less so, in regard to scientific institutions, in which we greatly excel the English. It may, however, be questioned, whether our universities do not present a classification of the sciences, which is far too extensive to be comprehended in a bare three years' course, and whether a condensation of them would not be productive of more solid benefits ? A *universitas literarum* must exult in the *opportunity* of teaching *every* branch of learning and science. I cannot help thinking, however, that many students, from being destitute of a helm's-man, grasp in an early stage at *too much* ; and this excess, under the disguise of polymathy, degenerates into a diseased state of superficial attainments, the next step to which, after a certain point is reached, consists in total stagnation. It is, in every branch, a leading characteristic of English industry to keep *one single object* in view, and to prefer a state of partial ignorance to a scanty and imperfect acquaintance with a multitude of objects. It is possible that this may spring from an indifference towards the diffusion of general knowledge. It may also frequently engender narrow and partial views of things ; but it must as often prove the source of depth and solidity of judgment.

I have observed, on a former occasion, that the *Academical Discipline*, peculiar to English universities, singularly contrasts with the spirit of indecision which forms so striking a feature in the German. With us, one hour is marked by ill-timed harshness, and the next by pernicious moderation : if we are apt to display our awkwardness in carrying statutes into effect, we are equally apt to betray a want of skill in dealing with the waywardness of youth ; we are tied down to a tedious course of judicial proceedings, where a summary process would spare the sacrifice of many a valuable hour, and act as the preventive of many a greater evil ; our system undergoes yearly revision, which brings with it incessant change of views and principles ; we are the creatures of an ignoble subserviency to prejudices, which have nothing but their antiquity to recommend them, whilst they are anathematized by the law and favoured by popular opinion ; we too often court applause and favour by pusillanimous forbearance ; but there is not one of those evils which press upon us with so heavy a hand as the *absence of public spirit*. These are the principal sources of a vexatious and constantly-recurring occurrence of scenes which are infinitely disgraceful to a seat

of learning. Such evils are unknown under the immovable forms and regulations which characterise the constitution of the English universities. It is naturally felt to be the interest of those to whom is committed the government of a commonwealth, where everything tends to the furtherance of intellectual improvement, and where so many religious and scientific edifices perpetually recall to mind the goodly purposes to which the spot is dedicated, that *external* peace and good order should be maintained. The means of upholding this enviable state exist in abundance ; whereas, in the German universities, they are but scantily provided. Küttner, who lived a long time in England, and particularly in Oxford, assures us ‘ that disorderly conduct, arising out of the association of the students with the lower classes, broils with mechanics and others, and assaults upon the townsmen, are quite unknown ; and that, if any disturbance arise from ineptiety, it is always laughed at, but never magnified into an affair productive of public commotions.’ The respective factions of the Whigs and Tories may have their partisans, but these are found rather among the graduates than the younger class of students. The greatest statesman of his day, William Pitt, who became Chancellor of the Exchequer at the age of two and twenty years, followed no vocation but that of learning and science when an under-graduate.

In the straightforward conduct of the executive, and the undeviating enforcement of the statutes, the *Vice-chancellor*, whose office is but annual, is powerfully supported by the *Proctors*, who are his immediate assistants, and responsible to the whole university for the maintenance of the public peace. It is such a system as this, of which the value is so sensibly felt by the most estimable portion of the students ; whilst, on the contrary, that very portion, in *our* universities, is too often trodden under foot by the insolence of those who prefer tumult to study, and are permitted, if not encouraged, to disturb the even current of academical pursuits. Whether the austerity of the English system ‘ breeds a slavish spirit, weakens self-confidence, and obstructs the free development of the noblest of human powers,’ as some persons have thought fit to insinuate, I shall leave every one to determine for himself. Where, I would ask them, does thought roam more unshackled, or the tongue deliver its expression with bolder energy ? Still, an intelligent German writer has not remarked, without some show of reason, that ‘ although we frequently see sound scholars sent forth from the monastic institutions of the English, we more frequently see them produce morose and untoward subjects ;’ and it must be

admitted that, if the student of a German university be not too much depressed by his necessities, and be sufficiently versed in the art of self-government, he leads a freer and blithsomer existence, and will reckon the years of his matriculation among the fairest of his earthly career. But, will it be alleged that a truly free and liberal spirit in *after life* is most discernible in that class which, during their academical course, have had nothing but the cry of liberty between their lips? Do we not, when following many an academical hero into the labyrinth of social life, find him the most humble, spiritless, and dependent of his class? Do we not often see those who, in the days of their juvenile impetuosity and enthusiasm, indulged in visionary schemes of freedom, which can never coexist with social order, exercise the most unfeeling and relentless tyranny over their dependents? This, at least, is certain, that, so long as academical laws do not impose narrow and vexatious restraints on the vivacious minds of youth, and so long as they do not convert their natural liveliness (across even the excess of which scintillations of a generous spirit may be discovered) into a statutory crime, they cannot prove a galling yoke to any human being who is seriously devoted to the cause of learning and morality. It is indeed most true—and the example of the most inexorable of republican governments may be our warrant for the assertion—that it is only under the protection of laws, which admit of no departure from them either to the right hand or the left, that *genuine freedom* can ripen to maturity.

The extraordinary fermentation which has been engendered by the commotions of the last forty years, has given currency to ideas which, if well digested and judiciously applied, may produce a noble harvest. They have already eradicated much that was corrupt. The years of youth, however, are the years rather of power than reflexion; and power becomes a perilous element, unless confined by rule and measure. For this reason, many a regulation may evince a provident wisdom on the part of the legislative power in Germany which is quite uncalled for in England. Let us hope that those who possess the ears of sovereigns may not instil into their minds a want of confidence towards the rising generation. The youth who is not utterly debased and lost possesses, on the whole, an inherent disposition to follow the right path. Industry is his best shield against aberration from it; and other follies will be corrected by nearer acquaintance with the school of life. Every day's experience teaches us that he may greatly err; but, at the same time, that from those who beguile and bedim his early ways a heavier account will be exacted.

## ON THE METHOD OF TEACHING FRENCH IN ENGLAND.

If we are asked for what purpose is the French language studied in England, the answer, we should imagine, is plain: —it is for the purpose of understanding the language either written or spoken, and of speaking it ourselves with tolerable ease. But is the attempt generally successful? We think not; and there are good reasons why it should not be successful, which we shall endeavour to point out, while at the same time we suggest some remedy for the evil. We might say increasing evil,—because, during the war, emigration secured us a number of teachers, who, if their method of instruction was not always the best, still understood their language, and were well acquainted with its literature. But now we are often compelled to have recourse to teachers of inferior education and acquirements, whose deficiency in the exact knowledge of their own language and literature is not, in general, compensated by any improvement in their methods of teaching. Besides this, there are but few good elementary books for teaching the French language. All these are serious obstacles in the way of improvement; and we shall, therefore, say a few more words on this subject before we explain our notions about improved methods.

Our two ancient universities have hitherto enjoyed the almost exclusive privilege of imposing on the country their own system of education. In their academic course they have, perhaps, wisely limited the objects of pursuit, thinking that what the English youth lose in variety of knowledge, is more than counterbalanced by the solidity of their acquirements in particular branches. Hence it happens that, while classical learning and mathematical science are pursued with ardour proportionate to the rewards held out, many branches of knowledge, some highly useful and others indispensable, remain without encouragement, and are consequently neglected. This is the case with modern languages. There are many young men, who yearly leave our universities as graduates, who are not able to translate, even with tolerable accuracy, an ordinary French author. The university system has its effect on the schools, and particularly the great schools, which are but so many hotbeds, in which young plants are raised, in due time to be transplanted to the fields of Alma Mater. In many of the great public schools, French is not a necessary part of the course of education; in some it is hardly tolerated; and in private schools in general it is taught in a most inefficient manner. As a proof of this,

how many, we may ask, leave school, after learning French for some years, utterly unable either to speak French or even understand it when spoken? Let us enumerate some of the more prominent parts of the way in which the learning of French is made a job of; for that is the word which most accurately expresses the fact. Sometimes the head of an establishment will charge each pupil from four to six guineas per annum for French, giving the teacher a much smaller sum; in other cases, the French teacher is also an usher, with a small salary, and the master gets French out of him for almost nothing, though he does not fail to make the pupil pay pretty dear for the commodity. This usher, who is often considered little better than an upper servant, is frequently a person of a very limited education, who has had little experience in the difficult art of teaching. He is despised by the boys, who can sometimes readily discover his defects, especially if he should be ignorant of Latin, which is so generally taught in our schools; and he is treated with little respect by the master, who imposes his daily duties, without being able to judge of the manner in which they are performed: for it should be remarked that a great many schoolmasters know very little of French, and some are entirely ignorant of it, and therefore unable to judge, even in the slightest degree, of a French teacher's capabilities. But even supposing that the French master is a well-educated gentleman (for such we sometimes see), he is so fettered by the routine imposed on him, that his scholars can reap but little benefit from his instruction. The schoolmaster himself has no method of teaching French; for, as we have remarked, he generally possesses only a very superficial knowledge of the language and still less of the literature. If he should happen to know something of the language, the greater part of it is due to the accident of having travelled in France, and the rest to a bad traditional method of teaching which he continues in his school. In addition to all this, the time allowed for teaching French is seldom if ever sufficient for the purpose; and as it is considered inferior in importance to the ordinary business of the school, the pupils often only turn it into ridicule, and, by a natural transition, the person, also, who is employed to teach it. Another great objection to the present system is this—the pupil while he is learning French, or supposed to be learning it, is not acquiring any knowledge of France or French history and literature. He spends all his time in learning some detached phrases about rain and fine weather, and other subjects appropriate to the climate; and these are often refashioned into something that passes

under the name of exercises. To conjugate French verbs by rote is another part of the system. When a French book is read, it is generally one printed in London, and *therefore* full of errors in orthography and accentuation, though the right understanding of the latter is of the highest importance. But what do these books generally contain? Nothing but extracts of trifling passages in prose and verse, scraped together from every quarter, without any taste in the selection or useful information in the matter. And even should the extracts be good, we maintain that a language cannot be learned so well by small extracts from different authors, as by studying carefully some one book, which shall interest and instruct the pupil by the matter it contains, as well as by its style and general character.

In many schools, it is true, they do use a single book, but that book is *Telemachus*, a sort of epic poem, without doubt excellent in its kind, but the least adapted for teaching French of any work that we could name. *Telemachus* is, of all books that we are acquainted with, the least consonant with the idiom of the French language, and offers to the learner the least store of pure genuine Gallicisms. Its monotonous superabundance of style soon tires the pupil, who finds only fatiguingly beautiful sentiment, and a number of facts strung together into a story, apparently for no other purpose but to introduce a series of sermons or moral discourses. It is not from such books as these that we choose to learn a modern language when we are old enough to be our own instructors. We take some book that treats of an interesting subject—some geographical description of the country—some historical sketch of it—or some work that treats of an art or science, which we make our own particular study. A similar plan ought to be followed in teaching French in our schools. Though there may be no books of the kind, to which we have alluded, that are perfectly faultless, yet there are some which will answer the purpose tolerably well, till the demand for text-books of that description shall create a supply of new and better books. This is a point on which we would insist most strongly, that, while a pupil is learning the French language, he should use such books as will give him correct information on the geography of France, its political history, and the biography of those men who have most contributed to form a national literature. Some information of this kind may be supplied, in the present want of suitable books, by the master giving lectures in the French language to the more advanced pupils, and requiring them to take down his words as they are pronounced. In this way they acquire a

facility of comprehending the spoken sounds of the language, and are exercised in the writing of it, while at the same time they are acquiring useful knowledge. A further step is, for the master to allow the pupils to take short notes of his lecture, and afterwards to require them to work up in French the substance of what they have heard. The value of such an exercise will be readily allowed by all who are conversant with the teaching of languages, and is well known to those who have tried the experiment.

In establishments for young ladies, French is, in general, not so badly taught, partly because more time is devoted to the subject, and partly because in many female schools it is made and considered to be an important part of the school business. We may, however, remark of female schools, that Molière and Racine are frequently put into the pupils' hands, which would be considered in France an outrage on decorum. It is no doubt done in England from a good motive, but it is a great mistake; for, though Molière and Racine (the latter in point of style) are the Terence and Virgil of France, they ought to be the last books read, and even then such pieces should be chosen as are not objectionable, and they should be studied in a very different way from the present mode, and they should be read in a *French* edition.

With regard to grammars and dictionaries, they form one of the most vicious parts of the system. The grammar is often filled with exercises, framed by a master on his own authority; while, in our opinion, exercises should always be founded on the authority of some established writers. These exercises are also detached sentences, unconnected in meaning and utterly uninteresting, instead of being parts of a continuous narrative, and instructive from the matter which they contain. Besides all this, the chapter of errata would be enormous, if it were ever thought worth while to make one in works intended for instruction in French. As to dictionaries, pocket ones are commonly used, which are not at all fit for pupils; they require something more. The old dictionary of Boyer, which is still used, is very defective, and the best edition, two volumes, quarto, is rarely found in schools. Sometimes we find an abridgment of both parts in one volume, octavo. The dictionary of Lévizac is also much used, which, in general, we should be inclined to commend, although it is very deficient in examples of French idioms. With respect to Chambaud and Descarrières, two volumes, quarto, London, it is in many respects a good work, but very often inaccurate in the English, and also somewhat behind the present state of the French language in what relates to

the more modern and newly established modes of expression. The best edition of this dictionary is the one revised by Boniface and printed at Paris, in two volumes, octavo, which, though the cheapest and most convenient edition, is at present but little known in England.

We have already said that, in many schools, the French master is also an usher, having other things to do besides teaching French. That this is a bad system we have also remarked; and we may add that the majority of these teachers are supplied in a way that does not tend to raise our opinion of their merit. School agents, who are unable to judge of a man's fitness for teaching French, are the providers who furnish a great number of schools with teachers, both French and English. When a French master is not in the degraded condition, almost inseparable from ushership as now in practice, he comes, perhaps, twice a-week for an hour, or an hour and a half, each time, and his course of instruction is necessarily not only subordinate to every other object in the school, but also fettered by the school routine in such a way as to be nearly useless. The result is not very different, even if the French master should be a man of superior merit. The best qualified teacher, in the eyes of the great principal, is generally the man who will work for the least money; for the school-master gains the more the less he pays for this branch of instruction. This may be made perfectly clear, thus:—Parents require their children to learn French because it is the fashion; but as they very often take no pains to know what progress their children make, it follows that the master will, as a general rule, get it done for the least that he can, and charge the parents for it as much as he thinks they will consent to pay. The economic criterion of a teacher's goodness is so carefully applied, that we know places where, during three years, we have seen six different masters. Again, in some schools we find an English, or more frequently an Irish teacher, who is required to know French; then the French becomes almost a clear gain to the master; though, we apprehend, the learning of the pupil and the profit of the French teacher are reduced to the lowest amount that united ignorance and rapacity can bring them down to. It is unnecessary to enter into all the minute details of all the various modes in which French is paid for and not taught. But we would add a word of caution to those who engage private teachers for their own families; for they have their time and all other arrangements at their own disposal, and if they can only get a good teacher, and allow him a reasonable portion of time for instruction, they cannot fail

to accomplish the desirable object of making their children familiar with one of the most useful of all European languages.

Teachers are obtained sometimes by advertisement, more frequently through the recommendation of a friend, often less competent than the inquirer himself to judge of the teacher's fitness. The petty love of petty patronage, the fruitful source of so much abuse both in public and private affairs, often induces a person to recommend a man, about whose fitness he knows nothing and has taken no pains to know. For those parents whose children have learned French for a year or eighteen months, we will suggest a few tests, which they may be able to apply, even if they possess a very moderate knowledge of the language, or none at all. Let them ask their children to translate on paper a few pages from some portion of a good French author, who writes in an easy and familiar narrative style. Whether the translation is good or bad English, or expressed in plain and correct or inelegant language, most people who have had an ordinary education may decide. Again, let them request the French master to read aloud and slowly, to their children, some easy narrative which they have not studied, and see if the youthful pupils can follow and understand him; let the pupils also write down, from dictation, some passage which the master reads slowly, and let it be compared with the book, for the purpose of ascertaining its correctness. And, lastly, let the master hold conversation with them in short sentences on some familiar topic, and let the parents observe if the children can understand what is said, and make, at least occasionally, a proper reply. If after twelve months' study, taking three or four lessons per week, this cannot be done by children of average ability, we advise the parents to change their master and get a new one.

Though we have condemned in strong terms the neglect of French, and other modern languages, in many of our schools, and the vicious system on which they are taught in others, we are aware that in many schools, both public and private, things are ordered differently. And this we do not say to temper at all the severity of our remarks, wherever they are applicable, but because we know and can cite cases where very important steps have been taken towards improving the teaching of modern languages. One of the first things to be done is to raise the master in the eyes of the pupils, as a preparatory step towards giving to that which he teaches the degree of importance which its usefulness deserves. At Rugby school the modern language-master ranks in all points with the classical assistant masters, there being no distinction

between them except that of standing in the school ;—the master who has been there the longest ranking before the others, but with no difference of authority or consequence. This master is paid 2*l.* 2*s.* per annum by every boy in the school, of which 12*s.* goes to his assistant master. In the lower forms, as much as three hours a-week are allowed ; in the other forms only two hours a-week for French or any other modern language.

Before going into details upon the method of teaching French which we would substitute for the abuses we have just pointed out, we will make some general observations, in order that the reader may better understand from what point of view we contemplate the subject. The natural faculties of most youths are nearly the same, but the manner in which they are developed in different individuals is widely different. The true dispositions of children are difficult both to discover and to direct ; but instead of attending to the investigation of these qualities, time is employed in teaching children a number of facts, of which many are useless, and many others take up the room of more substantial knowledge. The object ought to be to form the capacity for knowledge rather than to make children learned at once ; this point being once established, they will carry in themselves the means of acquiring any knowledge which may be necessary for their profession or their character in society, as Montaigne says—‘ ie vouldrais aussi qu'on feust soingneux de lui choisir un conducteur qui eust plustost la teste bien faicte que bien pleine.’—*Liv. I., cap. xxv.*

It is of the highest importance to avoid, as much as possible, turning the acquisition of knowledge into a forced task. To make children love study, they must be reasoned with on their own level, and their objections must be encouraged and answered with good nature. The reason why a pupil so often hates his lessons and his master is, because the latter forces the former on the learner, instead of leading him towards them, and endeavouring to make him regard them as being to the mind what his daily play is to the body. To raise the pupil to the height of the master, the latter must first descend towards him, which is very seldom done by those who undertake education in this country. It is not that we recommend instruction to be given in the form of play ; and in this we are supported by the opinion of the celebrated Madame de Staël, who says—

‘ L'éducation faite en s'amusant disperse la pensée ; la peine en tout genre est un des grands secrets de la nature ; l'esprit de l'enfant doit s'accoutumer aux efforts de l'étude, comme notre âme

à la souffrance. Le perfectionnement du premier âge tient au travail comme le perfectionnement du second à la douleur; il est à souhaiter que les parents et les maîtres n'abusent pas trop de ce double secret.'—*Allemagne*, vol. i., cap. xviii.

Again, in order that the master may possess influence over the mind of his pupils, he must himself be well acquainted with his subject. He should be able to supply the place of a book, and indeed to give a great deal of explanation that is not found in books. The pupil should be encouraged to ask questions, and they should be either answered, or some good reason given why they are not answered. But in the ordinary mode nothing is done without a book. It is nothing but book, book; and why so? Because the greater part of the masters can do nothing without them. A celebrated philosopher has laughed at the workmen of civilized nations who cannot move one step without a hundred instruments. What would he have said of those masters who cannot move a single step without book and rule\*? In oral instruction, which of all others is the most valuable, there is much to be done that books cannot teach; the master must do this; he must be competent to do it, and he must never cease to explain difficulties to his students, and encourage them to ask questions.

The master who undertakes to teach the French language should not only have a perfect acquaintance with the language itself, but also with the most indispensable branches of education, in order that he may be able to suggest such reflexions, and give such explanations, as the subject matter of the book may require. He should never pass from one line to another, whatever may be the subject, without making himself sure that what has been read is *perfectly well understood in every respect*. He should not forget that his pupils are also probably studying the Latin and Greek languages; and he should therefore explain the etymological connexion of many words with those in the Latin and Greek, and also historical allusions or imitations of the ancient writers. He should take care that every geographical name that the pupil meets with in his lesson, whether ancient or modern, should be known in Latin, French, and English, and pointed out on the map. In what relates to ancient Gaul, Cæsar and Strabo are our principal guides. If a translation be necessary, for the latter the master may use those of Laporte du Theil, Gosselin, and Coraï, and also the critical remarks of Maltebrun. Nor should he be entirely ignorant of the earlier

\* 'Il n'y a rien tel que d'allecher l'appetit et l'affection: autrement on ne fait que des ânes chargé de livres.'—*Montaigne*, liv. i., cap. xxv.

writers of France, particularly Grégoire de Tours, Nithard, the original poetry of the Troubadours, Joinville, and Froissart, in order that he may be able to lay before his more advanced pupils the history of the formation of the language; and, above all, Montaigne, the only writer of his age, who, with Amyot, is still read with delight. It is not necessary to cite authors more modern. He should also be well acquainted with the literary history both of France and Italy, in order that he may be able to connect the modern and ancient languages, and to explain their relationship, since the French language is almost entirely a derivation from the Latin.

*Ex.—‘ Gallia est omnis divisa in partes tres,’ &c.*

‘ *Tota Gallia est divisa in tres partes,*’ &c.

‘ *Toute la Gaule est divisée en trois parties,*’ &c.

The study of the etymology of the two languages throws light on many historical facts\*; we can thus learn things

\* To show the progress of the French language, we present some specimens of it at different periods:—

‘ Ergo xvi. Kalendæ Marsii, cum Lodhuvicus et Karolus in civitate, quæ olim Argentaria vocabatur, nunc autem Strasburg vulgò dicitur, et sacramenta quæ subter notata sunt Lodhuvicus Romana, Karolus verò teudisca lingua juraverunt, ac sic autè sacramenta circumfusam plébem, alter Teudisca, alter Romana lingua alloquuti sunt.’—(A. D. 842.)—*Nithardus.*

We give, first, the translation of the oath here alluded to, in the Latin of the age, to show better the different shades of deterioration through the different epochs.

*Translation in Latin of the 6th and 7th centuries.*

‘ Pro Dei amore, et pro Christiano poplo et nostro communai salvamento, de ista die in *abante*, in quantum Deus sapere et potera mi donat si salvare ego eccistum meum fratrem Karolum,’ &c.

*Original, 9th century.*

‘ Pro Deo amur, et pro Christiano poble et nostro commun salvament; dist di in avant, in quant Deus savir et podir me dunat, si salvara jeo cist meon frare Karlo,’ &c.

*Translation in Roman of the 12th century.*

‘ Por Dex amor, et por Christiano pople et nostre commun salvament, de cest jor in avant en kant Deus saveir et pooir me done, si salverai jeo cist meon frare Karle,’ &c.—*Bonamy.*—(*Mem. Acad. Inscript.* tome xxvi. p. 640.)

We regret we have not room to show, in detail, the *gradual change* from Latin into French, any further than by giving the translation in modern French:—

‘ Pour l'amour de Dieu et pour le peuple Chrétien, et notre commun salut, de ce jour en avant (à compter de ce jour), autant que Dieu m'en donue le savoir et le pouvoir, je défendrai mon frère Charles,’ &c.

We subjoin a specimen of Troubadour poetry, which may be easily deciphered by the aid of the Latin:—

*Extract from a Complaint on the death of Richard Coeur de Lion, by the Troubadour Gauclerm Faidit.* (1199.)

‘ Mortz es lo reys, e son passat mil an  
 Qu' anc tan pros hom no fo; ni no vi res,  
 Ni ja non fo mais hom del sieu semblan,  
 Tan larcs, tan pros, tan arditz, tal donaire;  
 Qu' Alixandres, lo reys que venquet Daire,  
 No cre que tan dones ni tan messes;  
 Ni anc Charles ni Artus tan valgues;  
 Qu' a tot lo mon se fes, qui'n vol ver dir,  
 Als us doptar et als autres grazin.’

where many would see only words. The middle ages, although from them we date our political institutions, are those of which we are most ignorant. It is in the original poetry of the Troubadours and Trouveres that we may find more certainly, than in many chronicles and legends, the real history and manners of the times.

Since the pupil is not usually allowed as much time for the study of French as for that of Latin and Greek, the master may divide his pupils into two classes. The lower of these may study the elements in the following manner :—

The master should cause the pupils to repeat the French alphabet after him aloud. When all the class has mastered the alphabet sounds, he should take pains to make them pronounce properly the *e*, *é*, *è*, and *ê*. He should show them that the *e* mute is a small part of the sound of the *u*; that in the monosyllables *les*, *mes*, *des*, *ces*, &c., it is followed by *s*, and is sounded as *é* long. He may then write the number 1 over the *e* mute. It must then be shown that the *é fermé*, with a sharp accent, is so called because it is pronounced with the mouth nearly shut, and is sounded in a clear and rather sharp manner, either long or short, according to circumstances. The importance of this accent, by which active and passive words are often distinguished, should be dwelt upon, since, by mistaking it, both the sense of a phrase is altered and the harmony destroyed. General rules should be given as to the manner of placing it. As, for example, it should be observed, that Latin nouns ending in *tas* take the termination *té* in French, as *veritas*, *vérité*, &c. Similar remarks should be made on the *è*, which is pronounced with the mouth open, and is to be found in the penultimate of most words which, in Latin, end in *er*, which words very often end in *ère* in French, as *pater*, *père*; *mater*, *mère*, &c. This accent, it might be further remarked, is not destroyed by the final *nt* in verbs, or by the *ment* in adverbs, as in *aimèrent*, *amèrent*.

The right pronunciation of this sound is most important, as, above all others, it contributes to the harmony of the language. It is the other extreme to the *e* mute, which occurs continually, and is very different from the *é fermé*. Most persons pronounce French ill, because they put the acute accent on every *e* which occurs. The *è* long should be carefully observed, as it marks the suppression of some letter, and makes the syllable long, conformably to the analogy of the Latin language. Thus, *mesme* becomes *même*. The same remark applies to *â* and *î*, as in *âme* and *dîmes*. This *é* is not pronounced in quite so sonorous a manner as the *è* grave. All words ending in *et* (excepting *et*, and) have

the sound of *é*. The same remark applies to the sounds of *ais*, *es*, and *ets*. We shall make no apology for these remarks on the accents, because we consider it of the utmost importance for learning to speak the French language, that they should be *completely* understood at the commencement; and because we consider, also, the power of *speaking* the French language as the object which the pupil should never lose sight of.

When these sounds are well understood, some book should be chosen to which is attached a translation in plain idiomatic English. There is at present no book which we can recommend as altogether suitable for this purpose, but still we may find some that will answer pretty well. The Dialogues of Madame de Genlis may serve, if the teacher will take care to correct those parts in which the English is not exact. When three or four of the easier dialogues are completely mastered, so that the pupil can read the French into English, and the English into French, with equal ease, we think he may go on to read some simple story, the master at the commencement aiding him as much as necessary, and by his remarks *introducing* the pupil to grammatical knowledge. As for a *grammar*, we only want it for reference. But whatever book be used, the master should read some sentences from it aloud, which should afterwards be read by the pupil in the same manner. When the pupil can pronounce a sentence well, the master should pass on to another—applying to each syllable the principles of pronunciation alluded to above. He should then give him a small portion to translate into English. Some elementary books of merit have vocabularies at the bottom of the page, which we think would be better at the end of the book, and we could wish that they were not constructed in the usual careless and incorrect mode of our ordinary dictionaries; each word should be given with all the inflexions which occur in the work, and the idioms at full length, with a double translation,—one literal, the other in the true English idiom. The vocabulary should also mark the person and tense of each verb which occurs, and should give all the grammatical explanations necessary. The Greek and Latin etymologies should be given by the master, when they are sufficiently clear for the pupil to follow them; otherwise they should be left for the second class.

The next step should be, to translate into French the English translation without the aid of the book. This should be done in a separate exercise book, leaving a margin on which the student should write the grammatical analysis of the principal words. In correcting this exercise, the master, instead

of setting the pupils right at once, should mark the faults, and give a grammatical precept by which they are to be corrected ; and this precept he should continually urge them to put to the test, and to verify by what occurs in their reading. At a second lesson, the pupils should again read the original French, and translate it, *vivâ voce*, into English ; and then they will feel themselves able to take their own English translation and read *that* into French, which will complete the exercise. This should be repeated in the same lesson until both exercises are made with equal facility. The original French should then be written down from the *dictation* of the master, as a step to French composition, and the understanding of the spoken language. A few lessons thus acquired will make the student feel that he has made progress, and he will be encouraged to proceed with confidence and pleasure. Again we affirm that little is done, unless the practice of writing the language, by retranslating every English translation into French, go step by step with the study of the original. It is unnecessary to say that the first lessons should be small in quantity. They may be increased as the student becomes more accustomed to the task. The master should give historical and geographical explanations, wherever they are necessary, with as much brevity as is consistent with perspicuity.

When Chambaud's and Descarrières' dictionary, edited by Boniface, cannot be obtained, the next that we should recommend is that of Lévizac, with the treatise on the verbs by Lequien, and the dictionary of verbs of M. Tarver, second edition. The works are not by any means free from defects, but they are really useful. In the last six months of the first year the pupils should learn by heart, with all possible correctness of pronunciation and accentuation, some of the more easy of La Fontaine's Fables, the master rendering into simple prose all those passages which contain the most difficult Gallicisms. A French edition should be chosen, the English ones being full of faults. La Fontaine is recommended because, above all other writers, with the exception of Madame de Sévigné, he abounds most with those real Gallicisms which occur continually in conversation and reading. There is not at present any edition of the French classics which is entirely suitable to young persons, in the choice of passages and notes.

We now come to the second year of study. Of course the method of proceeding is nearly the same as in the former year, with those developments which the students can now enter upon with profit. The history of France, both political and literary, should be studied with attention.

As there is no good literary history for the use of students, and as the work of La Harpe is both inaccurate and voluminous, besides being ill arranged and very partial, the master may take notes, for the first part of his course, from the excellent ‘*Histoire Littéraire de la France*,’ by the Benedictines of St. Maur. He may give these lessons by dictation, and may add the geographical and other remarks which the subject requires. He should, at the same time, furnish marginal remarks on grammar and etymology, of a deeper nature than were given to the first class. He should show that ninety-nine words out of a hundred are formed from the Latin, marking, at the same time, some of the more striking changes that have taken place in particular classes of words.

As we believe that the Latin language is not made much use of in facilitating the acquisition of the French, we shall just give a few examples of a classification which teachers may pursue further. We may remark also that the French nouns in general follow the genders of the Latin,—the neuter and masculine of the Latin corresponding to the French masculine, with very few exceptions, and the Latin feminine similarly corresponding to the French feminine. The following classes may all be extended very much further:—*Locus, lieu ; focus, feu ; jocus, jeu ; impunitas, impunité ; veritas, vérité ; vanitas, vanité ; horror, horreur ; honor, honneur ; caput, chef ; caballus, cheval ; jungere, joindre ; pingere, peindre ; videre, voir ; assidere, asseoir, &c.* It is unnecessary to give any more examples at present. The pupil, by pursuing this classification, will learn the French with more ease, and, at the same time, will commence on a rational principle the study of the comparison of languages.

In giving the fables of La Fontaine, the analogous ones of Æsop and Phædrus should be cited. Once a week Boileau should be the subject of translation, with references to the passages imitated from the classics. We think it would be very useful for students also to make translations from Latin into French, from such a book as Cæsar, the master taking care to show the striking points of resemblance and difference between the words and idioms of the two languages: the master might also at the same time explain, in connexion with this part of the subject, the political changes which the geography of Gaul has undergone up to the present time. In examining the changes which time has produced in the names of places in France, the teacher will find excellent opportunities of showing a number of curious analogies, such as we have just hinted at in the preceding paragraph.

The pupil should not attempt original French composition

until he can translate, with fluency, into French, either from Latin or English, and then only in the form of remarks upon his daily lessons. Both master and pupil should now speak nothing but French. As a recreation, the biography of the most celebrated French writers should be related, intermixed with amusing anecdotes, and in the form of conversations. In writing the above sketch we have been prevented by our limits from going into that detail which the subject would bear. We hope, nevertheless, that enough has been said to show what might be done, in comparison with what really is done. Two years of study, commencing at the age of ten or twelve, according to circumstances, arranged in this manner, would better answer the purpose than the four or five which are often spent in conjugating the verbs *avoir* and *être*, with occasional digressions upon the genders of nouns and the irregular verbs, which leave the pupil with a knowledge of the language of the same quality as that possessed by the leaves of his dictionary, only not quite so accurate.

In conclusion, the writer of this article hopes that, as the above remarks are founded on experience, they may be entitled to some attention. He is aware that it is impossible to lay down absolute rules for teaching any subject: those which he has briefly described are such as he has found useful, and it is for this reason that he submits them to the judgment and criticism of others.

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#### STATE OF EDUCATION IN TUSCANY IN THE YEAR 1830.

THE country whose intellectual condition and resources we propose to describe is of small extent, not exceeding in length, from north to south, one hundred and sixty miles, and in average breadth scarcely reaching sixty\*. But with the exception of the unwholesome *maremme*, or marsh lands, overflowed by the sea, it swarms with population; the whole amounting to one million three hundred thousand. Every step we tread calls to mind illustrious actions and immortal men; nor are there wanting, even at this day, a few choice spirits worthy at least to keep alive the fire on the altars which a grateful country has erected to the memory of their great predecessors.

There was never a more favourable moment than the present for observing the moral condition of this country. Tuscany never appeared to advantage in time of war, for, with

\* The area of Tuscany, including Elba, is generally stated at about 8500 sq. miles.

the exception of that portion of the population which derives its name from the city of Arezzo, whose emblem is a wild horse escaped from the hand which attempted to lead it, the Tuscans are, perhaps, the most pacific people on the face of the earth. Now, however, that the sweeping storm of French revolutionary fury has long ceased, and the tumbling billows which it raised are laid to rest, the rich treasures of the Tuscan mind, the gems of its genius, and its clear depths of thought, are fully discerned, which, in the troubled waters, escaped the most accurate observer \*.

### *I. The Tuscan Church, and Education of Ecclesiastics.*

In order to understand the moral condition of any Catholic country, it is indispensable, in the first place, to have correct ideas of the description and numbers of its ecclesiastical body. The Tuscan government, like every other absolute monarchy, takes good care not to make known to its subjects their own economical condition, as this might be supposed to imply in the people a right to discuss and to regulate it. There is, therefore, nothing left for us but to form our estimates of the unknown from the little that is known.

The population, amounting to about one million three hundred thousand, and the beneficed clergy and curates serving parishes being found in the country to be in a somewhat less ratio than one to 500 souls, and in the cities somewhat exceeding this, we may take the medium, which will give us an amount of 2600. The secular clergy, and the *religious* or regular clergy, who have no stated ecclesiastical employment, are always found somewhat to exceed in numbers those who have. So that, allowing 800 for the excess of the latter above the former, which is a low computation, we shall have, *for the whole ecclesiastical body of the Tuscan dominions, the gross amount of 6000.*

It is one of the functions of this body to take part in the national education, and the greater part of them are actually so occupied ; hence it will be seen how vast a sphere of influence over the public mind is open to them. In the Universities, the Colleges, the Seminaries, who is it that ascends the Professor's chair to become the source of illumination, as far as it is to be diffused, among the middle classes of the community ?—The Ecclesiastic. In the splendid palace of the noble, who is to communicate ideas worthy of his high station, to the hope of an illustrious house ?—The Eccle-

\* Written in May, 1830. The revolutionary spirit, which has since shown itself in Italy, has affected Tuscany far less than any other portion of that country.—April, 1831.

siastic. And in the remote country commune, who puts the spectacles on his nose, and takes the dreaded sceptre in hand, to teach the A B C to the ploughboy, and the *hoc genus, hæc musa*, to him who may aspire himself to become a public instructor?—The Ecclesiastic.

To such an extreme is this system carried, that even the instructress of the young ladies in the *Conservatorio*, whose office it is to superintend their progress in the noble arts of spelling and embroidery, must be an *oblatu*, an offering, one who has taken the veil, a species of priestess.

Before, therefore, we attempt to determine any further questions, let us see how the *educators* are *educated*—how far the fountains of public instruction are themselves pure, and whether they are likely to send forth sweet waters or bitter. Instead of trusting to circumstances or the future inclination of their offspring to direct them in their way of life, as in England, a child is hardly born to Italian parents before they begin to think to what art or profession they shall destine him. And if holy orders be the object of parental preference, the most anxious care is taken that, in that tender age, in which he can have neither affirmative nor negative voice in the business, his childish spirit should be bent towards the employment of those acts and the repetition of those forms which the Church enjoins. The little trembling lips murmur with frequent prayers, the sign of the cross is duly made on the infant breast, the rosary is handled betimes, the tender fingers are dipped in holy water, and the child soon goes by the name of *abbatino*, and learns to regard himself as a sort of sacred person devoted to the service of the Deity. At seven he goes to the public school, and between ten and twelve he is immured within the gloomy walls of the Seminary for Priests, and now (if not before, as, through the zeal of parents, is sometimes the case) he assumes the priestly garments, which, while they remind him of the decorum necessary to be observed in his manners, fix unalterably in his mind the feelings of the *caste*.

Here it will be naturally inquired whether it is probable, from circumstances, that the parents are influenced in general by worthy motives in the choice of a profession for their son? We think that the probability is in favour of their being so, since they must disregard the calls of *immediate* interest, which is, in general, most clamorous for indulgence, in order to attend to that which is more *remote*. The child could be more profitably employed, by a needy parent, in learning some mechanical art; for it is a very remarkable fact, and of great importance in forming an estimate of the moral condition of the Tuscan people, that whereas, in most

other countries, the learner must pay the master for his instructions in any art he may wish to acquire, in Tuscany the master is obliged to remunerate the services of the learner. This is a part of the wise policy of the Tuscan government, by which the useful *arts* are encouraged and a greater degree of respectability is secured to the *ecclesiastical* body. The three pauls a week which a father can receive for the labours of each of his sons placed with a carpenter or other mechanic, form a salutary counterbalance to the remote prospect of that greater ease, respectability, and comfort which will hereafter be enjoyed by the churchman. A still further check is imposed by the circumstance that the parents must expend a considerable sum on a son who is destined for holy orders. By them must be defrayed the expense of his priests' garments, about seven crowns a year—a much larger sum than would be necessary for one who was learning any useful art. By them also must, in general, be paid the sum of at least thirty-six crowns per annum, which, under the title of *retta*, is demanded for the board of each pupil at the Seminary of Priests. At the seminaries at Pisa and Florence fifty-six crowns per annum are paid at present.

On the other hand, the remote advantages of bringing up a son to the Church are very considerable. Devoted to celibacy, and having necessarily few wants from the simplicity of living which decorum requires, it is natural that, if well disposed, he should contribute to the maintenance of his parents in old age, and to the advancement in life of the children of his brothers and sisters; and, should there be no hope of his ever rising higher than to be one of the numerous Canons of the twenty-one Cathedrals of Tuscany, the *seven hundred crowns per annum* he would enjoy without labour in this situation hold out a sufficient inducement. In order to be entitled to holy orders, it is necessary that the individual should declare himself to be worth thirty crowns per annum, so that the absolutely indigent are excluded. A nomination to a benefice to that amount is allowed to be equivalent to property. Benefices of this low amount are very commonly held by young Corsican clergy, who have been very indifferently educated in their own country, but from their hardy mountain constitutions and habits can live on the smallest pittance. There are supposed to be 300 of this humble class in Tuscany, who appear to correspond to our Westmoreland curates.

Before we proceed any further, it may be proper, once for all, to enter into some explanation of the value of the Tuscan coins, and, what is of more importance to be borne in mind, the relative value which Tuscan ideas and modes of living

attach to certain sums of money as compared with the ideas and modes of living of the English. The value of a paul is sixpence, although, from the rate of exchange having for many years past been in favour of England, a sixpence is worth a fraction more than a paul ; 40 of the former, or 1*l.* sterling, being equal to about 43 or 45 of the latter. The *scudo*, or crown, contains ten pauls, and may therefore be reckoned at five shillings. Such is the actual value of the pieces of money of which we shall in this narrative have occasion to speak. But even an Englishman travelling in Tuscany, with all the mistakes into which his ignorance will lead him, and all the imposition to which it will lay him open, will find, if he is possessed of the average degree of prudence, that a paul, or sixpence, will be worth to him as much as a shilling would in England. And when we take further into account the bargains which a native will be enabled to make in dealing with his countrymen, (and how great a difference this will make in a year's expenses cannot be conceived by those who do not intimately know the Italian character,) and the low scale at which the ideas of expense and modes of living are fixed, compared with the English, a paul may be said to be equal to two shillings, or four times its nominal value. So that when we have said, above, that the Tuscan parent can obtain three pauls per week for the labour of each of his boys, it is the same thing as if we had said of an English parent that he could obtain six shillings. In the same way, when he pays 3*l.* crowns for the board of his son, he may be considered as paying 3*6l.* ; and the canonicate to which that son may aspire may be regarded as bringing him in 700*l.* sterling per annum. We should, however, exclude from the comparison those parts of England in which, from the great abundance of fish or poultry, the means of sustenance are *remarkably* cheap, such as Cornwall, and, until of late years, Devonshire ; and we would compare Leghorn with Bristol ; Pisa, the seat of the principal Tuscan University, with Oxford ; Siena with Chester or Norwich, Florence with London, and the provincial parts of Tuscany in general with the inland counties of England. For example, eight lofty and good-sized apartments, with kitchen, may be obtained, *by an Italian*, in Florence, at 50 crowns per annum, *i. e.* 12*l.* 10*s.* sterling.

At seven years of age it is time that our young Ecclesiastic should go to the public school, where, at the expense of the commune or of a pious foundation, the future priest is instructed by one who already bears that sacred character. Here he learns reading, writing, arithmetic, and the rudi-

ments of Latin. The grammar employed in teaching the latter language is that well known throughout Italy as the *Padua Grammar*, into which none of the modern improvements of German and English grammarians have found their way. For construing, extracts from the historical parts of the Vulgate translation of the Bible are employed, in conjunction with some easy Latin author. These ancient institutions, with the exception of the six sectional schools for each of the divisions of Florence, may be described as being in a very neglected state, and the five years spent here as pretty nearly lost. The expression of a parent in speaking on this subject to the writer, savoured of Italian hyperbole, but was, in some degree, founded on fact,—‘ My son knew a little before I sent him to school, but, when he came back, he knew nothing.’

His next step is to the Seminary for Priests. There are twenty-one dioceses in Tuscany, and each is provided with its seminary, besides similar institutions, under the name of colleges, for the education of the priests destined for the special service of the immense cathedrals of Florence, Pisa, and Siena, whose numerous altars and unusually splendid ritual require the ministrations of a large body of servants. Here he continues his Latin studies, and learns as much Greek (through the medium of the old Padua Grammar again) as is necessary to construe the Greek Testament and some of the Greek Fathers. He also studies logic, rhetoric, mathematics, natural philosophy, although but sparingly, and reads some portions of the vast and instructive page of history, ecclesiastical and profane. The former of these in particular, ecclesiastical history, is considered as a dangerous branch of knowledge, and only to be pursued at the seminary under the strictest regulations, as being calculated to call into doubt principles and facts the belief of which is essential to the Catholic religion. Metaphysics are likewise taught with a special view to their bearing upon dogmatic theology. Here the *general* education of a priest ends, for the remainder of eight or ten years passed in the seminary is devoted to theological studies, and he very rarely goes to a university. It will be seen, therefore, that his education is, generally speaking, extremely limited. In some of the country seminaries Greek is not taught at all, and in none of them is it conceived to be desirable that a priest should be an elegant scholar or a profound man of science. One branch of science, natural history, in its most extended sense, is entirely omitted; although there is no subject of human knowledge better calculated to enlarge the

mind and agreeably to occupy the thoughts of an ecclesiastic, and to furnish him with a store of pleasing illustrations for his discourses. The study of the Hebrew language is likewise but rarely attended to, and that of the other Eastern and of all modern languages is generally neglected. In order to hold the office of a Bishop, or that of the Vicar of a Bishop, it is necessary to have taken the diplomas of civil and canon law at a University, but the great bulk of the clergy never enter the walls of a University.

Each seminary is under the immediate control of the Bishop of the diocese, who nominates the Rector and the masters from amongst his own clergy. The moral conduct of the inmates is subject to the most vigilant inspection, and they are obliged to observe with great rigour all the laws and regulations of the Church. They fast most strictly during Lent and on the other appointed days, which amount in the whole year to about 65 out of the 365. They take part in the services of the neighbouring cathedral, besides the long morning and evening prayers of their own private chapel. Their intercourse with even their *relatives* without, is exactly regulated; so that the hours passed within the lofty walls of the seminary are very commonly remembered as those of weariness and sorrow, and the youth pants for the time when the imposition of holy hands shall make him again an inhabitant of the world and a partaker of its enjoyments. Ten years being at length terminated, and our student having attained his twenty-fourth year, and received ordination, he is now ready himself to mount the professor's chair—with what qualifications for it (as regards the great body of ecclesiastics) the reader may now judge.

Before we conclude this head, we will give a list of the professorships in the Seminary of San Giorgio, at Siena, as a specimen. 1. Dogmatic Theology. 2. Moral Theology. 3. Mathematics. 4. Civil and Canon Law. 5. An *Honorary Reader* in Greek and Italian literature, who, by way of mere appendage to his office, is also 'Professor of Metaphysics, Ethics, and Natural Philosophy.' Here (as well as in the other seminaries in large towns) *lay* students are also admitted. There are at present 35 divinity students, and about 80 lay students. Elementary instruction is given by masters attending from the town.

Such is the education of the *secular* clergy (for of them alone we have hitherto spoken); and it must be declared to their honour that, in so far as they have attained to any distinction as scholars, philosophers, or men of general know-

ledge, they have been indebted to their own desire of improvement and successful pursuit of it, rather than to the provisions made by the Church and State for their education. To the honour of the Tuscan priests, then, be it recorded, that in successive ages since the revival of learning there have never been wanting a few, a very few, of this body who have been eminent in the various walks of science and learning, who have successfully cultivated the Muses, and who have written their own sonorous and beautiful language, and its kindred and more ancient tongue, in all their purity and force.

As these brief hints relate to the year 1830, it only falls within our province to speak of the living. 1. The *Canonico Borghi*, Librarian at the Riccardian Library at Florence, is the elegant and learned translator of the Odes of Pindar into Italian verse. 2. The *Abate Zannoni*, curator of the antiquities in the Gallery de' Medici, is principally known to the public by his accounts of the excavations and discoveries successively made at Volterra; but he has also passed the office of President of the Academy of La Crusca, and has published a comedy written in the present dialect of the country people of Camaldoli. 3. The *Canonico Moreni* is celebrated for his works on the history and biography of his native country. 4. The *Canonico Boni* is distinguished by his knowledge of Greek literature. 5. The *Abate Follini*, Librarian of the Magliabechian Library, is a man of profound learning. 6. The *Canonico Pacchiani*, Professor Emeritus of Natural Philosophy in the University of Pisa, is a man of great critical acumen and profound research respecting the origin and history of the Italian language, as well as eminent in the branch of science over which he lately presided. 7. The *Canonico de Angelis*, Professor of Dogmatic Theology at Siena, is author of a learned history of his own University, and other valuable works. 8. The *Abate Pedani*, editor of the Florence Gazette, although but little known, has published some beautiful elegiac odes, and is a most exact and astonishingly fluent speaker of the Latin language. 9. The *Abate Fioravanti* has published nothing, but is probably better known than many who have written extensive works. He is an ardent admirer and student of the great Italian poets, particularly Dante, which he reads with an enthusiasm which is inspiring to his hearers, and possesses so much taste, information, and urbanity of manners as to render his society sought after by every distinguished foreigner who visits Florence. 10. The *Canonico Bagnoli*, Professor of Greek and Latin Literature at Pisa, is

the author of ‘Il Cadmo,’ an historico-philosophical poem, by which he procured himself great celebrity.

The Tuscan church is not a rich one, and the clergy are, as a body, neither indolent in their calling nor worldly-minded. The bishops (with one exception, we have been told) never meddle with the affairs of the state, and are in general mild in the exercise of their spiritual authority. Their emoluments are small, with the exception of Florence, which has a revenue of 12,000 crowns (3000*l.*) per annum, and, including the use of palaces, &c., is estimated at 18,000 crowns. It ought to be observed also, with reference to what has been said before respecting the relative value of money in England and Tuscany, that in a rank of life where *foreign* luxuries are expected to form a part of daily consumption, a crown cannot be considered to be worth anything like a pound sterling. French wines, for instance, and the finest broad cloth, are at about the same price as in England. The other sees are worth about 3000 or 4000 crowns per annum ; and two or three of them only, about 800 or 1000. But translations are very rare.

The sees are as follows, including Lucca and Massa, which are ecclesiastically connected with Tuscany, and usually reckoned, therefore, as Tuscan bishoprics. 1. FLORENCE (archp.), having for suffragans, Colle, Fiesole, Pistoja and Prato, San Miniato, San Sepolcro. 2. PISA (archp.), Leg horn, Pontremoli. 3. SIENA (archp.), Chiusi, Grosseto, Massa, Sovana. 4. LUCCA (archp.), not suffragan, Arezzo, Cortona, Montalcino, Monte Pulciano, Pescia, and Volterra.

In order to understand how the *educators* of the Tuscan youth are themselves educated, it is necessary to say something respecting the MONASTIC ORDERS.

The Certosini or *Chartreuse* friars appear to lead very happy lives in the delicious retreats to which they have banished themselves, where they are surrounded by all the elegances of the fine arts and the comforts of life.

The Franciscan friars are in general a corpulent, easy tempered, and insignificant set of men, very well content to find themselves tolerated by a world which once reverenced them, and have no pretensions to influence the state of education. The Capuchins send out eminent preachers educated amongst themselves ; but the *Scuoloppii*, as they are vulgarly called in Italy, from a contraction of the words *scuole pie*, or the brethren of the pious schools, are amongst the chief educators of the rising generation. This order took its rise in Spain in the fourteenth century, and has been distinguished, ever since its foundation, for the high respectability,

cultivation, and intelligence of its members. To the three ordinary vows of poverty, chastity, and obedience to their own superiors and their General at Rome, this order adds that of gratuitous employment in education; so that a friar of this order is necessarily a professor, none being admitted who will not or cannot occupy themselves constantly in some branch or other of education. For this reason they do not congregate in large numbers, but in every city or principal town of Tuscany there is a little knot of these laborious and self-denying men, diffusing the greatest of earthly blessings around them for no earthly reward; for, to their honour be it spoken, the law of their community, which forbids them to receive any remuneration for their instructions, is not only never *transgressed*, but never (what it was more likely to be) *evaded*. A few pounds of chocolate at each of the vacations, or some such harmless present, is said to be the only return they receive for superintending, for many a weary year, the education of those, many of whom are perfectly able amply to repay their labours. Their schools, which, from the kind of instruction given in them, might rather be called colleges, are less numerously attended than they merit, from a prejudice against their severe modes of discipline, and the frequency of corporal punishment. In so far as the complaint is well-founded, as it probably is in some degree, this circumstance may be attributed to their being condemned to celibacy, and consequently having no proper sympathy with children,—an evil which the secular clergy are more likely to avoid, from their greater intercourse with the world. The writer of this article is, however, acquainted with a remarkable instance of the reverse of this treatment in the *Padre Pendola*, at Siena, who gratuitously instructs the children of the Deaf and Dumb Institution there, with a truly paternal suavity of manner and patience of instruction. The peculiar excellence of their mode of teaching is, that instead of adhering with pertinacity to the beaten track of their predecessors, as the priests commonly do, they have their ears and eyes perpetually open to every kind of improvement in education, and study new systems of metaphysics, morals, &c., with a view of making their pupils acquainted with them. It is true that they endeavour to give them a strong bias in favour of whatever is established and has been long in repute; and if anything new is presented to their hearers, it is with a view of directing the whole strength of their powerful minds to the confutation of it. In this they will sometimes be successful, and at others not. But, at all events, the opportunity of judging is fairly afforded. The

pious schools at Florence and Siena are in the greatest repute, owing principally to the distinguished talents of the *Padre Ricca*, in natural philosophy and natural history, at the latter place, and the still greater fame of the *Padre Inghirami*, who is director of the observatory, and may be called the *astronomer royal*, at the former, both of whom have published several works connected with their respective branches of science. The professors of these two celebrated establishments proceed from the humblest elementary teaching to the highest branches of knowledge. The writer has attended their lectures on natural philosophy, in Florence, with the greatest pleasure and improvement. The manner of the professor was not only remarkably clear, but so animated as necessarily to secure the attention of his hearers. Towards the close of the course, the professor announced his readiness to receive voluntary contributions towards defraying the expense of machinery and experiments, incurred by the convent, which, as it included a beautiful model of a steam-engine, must in that year have been considerable.

During the French revolution and government all the monasteries in Tuscany were suppressed, except the *Scuole Pie*. Since the restoration, the Grand Duke has allowed to the surviving monks the sum of thirty crowns per annum, as a pension, in lieu of their former conventional demesnes, and this even if they become secular priests and obtain lucrative employments. But he favours their uniting themselves again into convents, by allowing them in that case an equivalent in land, which is more serviceable to them, *as a body*, than the same amount in cash; as they can live comfortably together on the produce of the land, and lay by for the future wants of the convent out of the profits of their industry.

Among the other orders, the *Padre Buttini*, a Servite (which order was established in Florence A.D. 1233), has distinguished himself by an able work on the manners of the middle ages. *Ciampi*, a Tuscan, who was sent for by the University of Wilna to take the professorship of the Greek language, in which, and other branches of learning, he is deeply skilled, was also once a monk. He is now Professor Emeritus.

## II. *Education of the Nobility.*

There are in Tuscany two species of nobility; the first is that which is derived from birth or creation, the second is that which arises from the exercise of an employment or pro-

fession which is held to be noble. In this latter sense, however improper we may deem the application of the term, the heads of each department of the servants of the crown, *e.g.* the collector and comptroller of the customs, the receiver-general of the tobacco duties, the director of the department of bridges and roads, the head librarians and the keepers of the museums, the professors of the universities, the advocates, all the clergy who have received full ordination, and all persons decorated with a cross, are noblemen. Although, therefore, the circle of nobility is exclusive in Tuscany, as well as in other countries, it is easy to perceive that by the help of so generous an interpretation of what constitutes a nobleman, the class is a widely extended one, and may be presumed to include the great bulk of the well-informed and cultivated part of the community. For the sake of greater distinctness, however, we shall, under the present head, confine the application of the term to the high, as it is called in Italy, or the hereditary nobility. The education of this class previously to the French Revolution was of the worst possible kind, and it still continues to be wretchedly bad in those cases in which the old plan of *domestic* education is persevered in; Italian parents, and especially noble parents, being much too indulgent to afford the hope that they should ever *allow* their children to be properly disciplined and instructed under their own roof. The system, now nearly shamed out of existence, is this:—The ‘illustrious’ parents choose a good-humoured young priestling, who may perhaps possess better qualifications, but is selected because an empty purse makes him readily subservient to the will of those who can supply his necessities. The poor man soon finds that he is well or ill treated by the family in exact proportion to the greater or less degree of indulgence he shows to his lordling pupil. ‘Al signorino duole un po’ la testa ; il signorino ha d’andare in carrozza con i genitori ; non gli guasti il buon umore, poverino !’ ‘The young gentleman’s head aches ; the young gentleman must ride out with his parents ; do not spoil his fine temper, poor fellow !’ are excuses for the son’s negligences, to which the preceptor dares offer no reply. The children of the family pass so very little of their time, in general, in the company of their parents, that the latter take care that they shall, at all hazards, be in good humour on such occasions ; and however anxious a tutor may be conscientiously to acquit himself of his charge, he finds his good intentions defeated by a power which he cannot combat. The young lord grows up wayward and ignorant ; and if he ever afterwards distinguishes himself by his

acquirements, it is in spite, and not in consequence, of his early education. In a posthumous volume of the Satires of Alfieri \*, published in 1804, this absurd and injurious system fell under so powerful a lash, that it is surprising it should have survived its castigation.

There is still to be seen occasionally in the neighbourhood of Florence the poor little spiritless *contino*, not more than five years of age, and far from corresponding to the description of paternal partiality, *pien d' ingegno*, not led, but driven forward by a tall, gloomy, clumsy *pretone*, Don Raglia da Bastiero himself, poring over a book, and apparently destitute of even a spark of sympathy for his little charge.

Allowance must of course be made for the exaggeration of a satirist; but it is surprising that, under a system of domestic education which could afford any foundation for such a picture as the one alluded to, noblemen should have been found to distinguish themselves either by their attainments at the university or by their actions in life. Happily, a very different system is now nearly universally adopted. The principal part of the education of the Tuscan nobility is now generally conducted at the *Collegi de' Nobili*, the most celebrated of which is that at Siena, called Collegio Tolemei, from the noble family who endowed it, where the pupils enjoy the benefit of the able instruction of the monks of the Scuole Pie, adjoining to whose convent the college premises are for this purpose erected. That they should accept the gratuitous services of these excellent monks will not appear surprising, when it is considered that the lectures at the universities, although paid for by the state, are gratuitous to the public; and that in a country where gardens, museums, galleries, exhibitions, libraries, all the stores of learning and the arts in short, are as freely open to all as the light and air of heaven, the duty of paying, and the shame of not paying, cannot be expected to be so firmly rooted in the minds of the natives as they are in those of our own countrymen. And it would be a strange perversity which would insist on having the worst, and paying for it, when the best is to be had for nothing. A few of the Tuscan nobility, after finishing their studies at their own colleges, go to one of the national universities; but a Tuscan noble going abroad for education would be a phenomenon. On the whole, their education may be considered as being still inferior to that of the same class in the other continental nations. Yet, as

\* Sat. VI.—L' *Educazione*.

there are not more than about a dozen of them who are possessed of extensive wealth, they find sufficient inducement to employ their subsequent leisure in the pursuits of science and literature. And there is no country in the world where *life* itself is *education* in so great a degree as in Tuscany. Let us suppose a noble Florentine, for example, to have been educated by a priest, formed on the model of the dark ages —a man of the tenth century revived. Even for one so brought up to the age of manhood, the monuments of antiquity around him would not forbear to tell their tale of the history of former times ; nor could the heart-stirring compositions of the finest geniuses, in the most beautiful language that exists, as nightly heard at the theatres, fail to inspire the sentiments of liberty and patriotism ; nor could he listen to any of their admirable improvvisatori, nor be present at their brilliant conversazioni, nor be exposed to the blaze of light which from a thousand other quarters would burst upon him, without learning something new and valuable every day and hour of his life.

(1.) Among the living nobility of Florence, the most distinguished for his classical acquirements, as well as for his poetic genius, is *G. B. Niccolini*, whose prose writings on subjects of taste and criticism are reckoned models of the language. But he is most known and admired as a poet and a patriot poet. His tragedy of *Antonio Foscarini* in particular, in which the sentiments of an unconquerable love of liberty, and of an exalted, unbending sense of public justice and honour, are poured forth with all the majesty and sweetness that the Tuscan tongue possesses, is listened to by his countrymen, night after night, with never-wearying applause. During the winter of 1829, when this tragedy was several times represented at Florence, the people went at twelve o'clock in the day to secure their places, patiently waiting until half-past seven for the commencement of the performance.

(2.) Although he is lately dead (and, therefore, does not strictly fall within the present plan), we cannot refrain from mentioning the *Count d' Elci*, to whom the capital is under immense obligations for the gift of a library estimated at the value of a hundred thousand pounds sterling, collected by himself, comprising a vast number of rare works in various languages ; amongst which are, what Tuscany was before deficient in, editiones principes of the Greek and Roman classics. D' Elci published in his lifetime a corrected text of Lucan, and a good many satires written in elegant Latin verse. This princely gift, for the reception of

which the Grand Duke has erected additional apartments to the celebrated Lorenzo-Medicean Library, forms the *fifth* of those noble institutions which are now open to the public. The charming library of the Accademia delle Belle Arti may indeed be said to make the number six, as permission is granted to any respectable person to read there.

(3.) Another precious bequest to Tuscany by one of her nobles was the foundation of an academy of mutual instruction in the arts, sciences, and languages, by the Count *Luigi Bardi*, who died a few months ago. The institution is not to be opened for five years. Count Bardi distinguished himself in early life by the publication of an elegant dissertation on the progress of the sciences in Tuscany, read before the Lyceum, an institution for the delivery of lectures and essays, founded by the Queen of Etruria, Maria Luisa, in the year 1807, and abolished by Ferdinand III. on his restoration in 1814.

(4.) The Count *Baldelli Boni*, governor of Siena, who is a native of Cortona in Tuscany, is a member of the Academy of La Crusca, under whose sanction he has published biographical and literary notices of the lives of Petrarch, Boccaccio, and Macchiavelli, and the Voyages of Discovery of Marco Polo in the thirteenth century, in two volumes quarto, with numerous geographical, scientific, and philological notes and dissertations \*.

(5.) The Cavalier *Mancini* is a very agreeable poet, and has published an Italian translation of the Iliad, of the Georgics of Virgil, and last, but not the least difficult or successful of his undertakings, of Pope's Essay on Man.

(6.) The Marquis *Gino Capponi* possesses very considerable literary talents, and is one of the chief supports of the *Antologia*, a monthly journal of great merit, published by Vieusseux, and read throughout Europe. *Capponi's* articles commonly have his name affixed.

Amongst the young nobility of Tuscany, one of the favourite methods of promoting the interests of their country is studying the theory of agriculture, and occasionally, but too rarely, putting theory to the test of experience. Whether the celebrated Imperial and Royal Society of the *Georgofili*, which assumes a high literary character, as well as agricultural, has been of much real service to their country, is doubted by many. But the intention is laudable; and amongst these literary and philosophical agriculturists, their noble secretary, (7.) the Marquess *Cosimo Ridolfi*, is much

\* He died April, 1831.

distinguished by his publications and experiments ; and it is proper to add, that his claims to notice as a literary man and a philanthropist do not rest solely on the merits of that society. He is the munificent patron of schools on the Lancasterian plan for instruction in the fine arts and in useful knowledge. . . .

A great proportion of eminent statesmen and public officers in Tuscany have arisen from the lowest rank, as we shall hereafter have occasion to show in speaking of the education of the people. Several, however, are descended from the ancient nobility of the country. Amongst these are (8.) the *Prince Corsini*, the very able minister of state for the home department ; and (9.) *Count Fossumbroni*, at present, and for many years past, prime minister of Tuscany, of whose talents and public virtues it would be difficult to say enough. He is now seventy-two years of age, and having held posts of distinction under successive governments, he has, for more than thirty years, been a blessing to his country. He is profoundly skilled in the exact sciences, yet possesses an equally ample knowledge of mankind. He enjoys so entirely the confidence of the present Grand Duke, that, although only the minister of an absolute monarch, he may be said to concentrate in himself the government of Tuscany. He has always shown himself the prompt and vigorous opponent of any attempted usurpation on the part of the court of Rome.

Fossumbroni is well skilled in practical hydraulics ; and most of the plans for the draining of the marsh lands, and other similar improvements in the face of the country, have not only been generally projected, but actually planned and personally inspected by the prime minister. He is a zealous patron of merit in every rank of life ; and if any act of manifest injustice or oppression in this country is not repaired or punished, it is because Fossumbroni's arm has been paralysed by the machinations of other persons *still nearer the imperial and royal ear than the premier*. Without having recourse to corruption to increase the very moderate emoluments of his office, it is said that, although simple in his mode of life, he will die poor.

### III. *Education of Females.*

! Next to the education of the nobility, it seems proper to notice that of the young females of the higher ranks, as that of the lower ranks will come to be described under the head of the People. And here, were we to describe the state

of female education thirty years ago, we should have a woful tale to tell. Alfieri, in the satire on education before referred to, represents his ' Illustrious Count ' as consigning to the tutor of his five hopeful sons, merely by way of appendage to his duties, to explain to his daughter, who had not yet entered the convent, what least of all things in the world require explanation—*the airs to Metastasio's Dramas*; adding that the countess had no time to attend to her education, and he still less. Italian ladies of middle age describe the education of their youth as having been defective in the extreme. As the boys were immured in the college or seminary, so they were shut up in the convent for year after year, the progress of their education being as slow as that of time seemed to them to be. The Tuscan convents, previously to the French Revolution, were not only in a state of gross ignorance, but, in some instances, nurseries of vice. Although it cannot be doubted that in the worst times there were many of their inmates to whom the language of Spenser might apply,

Whose only joy was to relieve the needs  
Of wretched soules and helpe the helplesse poore :  
All night she spent in bidding of her bedes,  
And all the day in doing good and godly deedes—

yet in general no system of education can be conceived more absurd and injurious than that which places those who are designed to constitute the charm of the social circle, under the training and instruction of recluses. This system is still persevered in : for Tuscany does not contain, as far as the writer is aware, a single establishment for the education of females of the higher class, which is not conventional. Public opinion has, however, so far prevailed, that the best masters in the branches of knowledge, useful or ornamental to the female sex, are now called in to aid the instruction of the nuns, and that without any regard to their being ecclesiastics or laymen ; so that the sarcasms of many travellers at the *general* ignorance of the Italian ladies, as regards Tuscany, may be said to be no longer applicable. No longer can it be said that, with the exception of a few score of pedants, the Italian ladies can do nothing but sing and tambour, and that there is no medium between a doctor of laws (to which distinction ladies are allowed to aspire) and one who cannot write her own name. Italy still possesses *many* ladies of genius and learning, and Tuscany *a few* ; but they no longer stand at the same immeasurable elevation above the rest of their sex. Allowance must be made by travellers for the mode in which the display of female talent is encou-

raged in Italy. It is very contrary to English taste to see very young ladies of rank act or recite at amateur theatres, or before very large audiences, invited for the express purpose of witnessing this display, at the houses of their parents. This feeling apart, the writer has been deeply interested at witnessing the recitation of the deep-toned tragedies of Alfieri, and the most sublime passages of Dante, with such a delicate discrimination, and with a taste and feeling so completely entering into the soul of the author, as to convey the conviction that the fair dilettanti, while they possessed minds cast in no ordinary mould, had been trained likewise by no ordinary routine of instruction. The *Florentine* ladies in particular, of the rising generation, are incomparable readers and reciters, a distinction which they owe to the instructions of Signor Morrocchesi, professor of declamation, and formerly an actor, who had the singular merit of rendering popular the once neglected performances of the great reviver (not to say the father) of Italian tragedy. As the following anecdote speaks highly in favour of the character of one, of whose feelings and disposition little that is favourable is recorded, it is worth relating. In 1800, Alfieri's tragedy of Saul, composed by him and performed on the Roman stage in 1783, had, in common with his other tragedies, experienced seventeen years of neglect. Although acted, they were little understood or admired, because there were no actors who could give effect to a degree of energy and variety wholly new to the Italian tragedy. The monotony of delivery, which is still by the multitude regarded as even a *rule* of Italian recitation in the serious style, was absolute murder to the bold conceptions of Alfieri. Unexpectedly, however, he was informed that his Saul was becoming popular at the Teatro Nuovo of Florence. Incredulous of the fact, he went, and found, to his inexpressible delight, Marrocchesi, before a crowded audience, the very Saul of his own imaginings. The actor, a man of genuine sensibility, was so overcome by the presence and plaudits of the author, that when he came to the end of the Fifth Act, where, exclaiming—

Empia Filiste,

Mi troverai, ma almen da re, qui . . . morto,—

he falls on his sword, he was very near inflicting on himself a more than dramatic death, and having severely wounded himself, was carried off the stage apparently dead. Alfieri darted behind the scenes, and having personally paid him every attention necessary for his restoration, was the first object which met the eyes of the recovered actor, affection-

ately pressing his hand in his. And from that moment to the end of the poet's life, the reviver of Italian tragedy was the warm and generous friend and patron of the reviver of the art of declamation in Tuscany.

This anecdote may serve to show that the ladies of Florence, by placing themselves under such an instructor, are not only acquiring an art by which they may afford a rational and pleasing amusement to their friends, but are in the way of having their taste and sensibilities cultivated, and their moral and intellectual elevation advanced. If the reader lament that public display should be made a principal object in female education, we agree with him in this sentiment; but it is our business to represent facts as they are, not as we would wish them. As there are no boarding-schools for young ladies in Tuscany, it becomes an interesting inquiry how far the '*educatrici*' attached to the convents, in point of extent and number of pupils, supply their place. The capital may serve as a specimen, where there are seven of these institutions. 1st. The *educatorio* of the convent of the *Annunciata*, under the special patronage of the Grand Duchess, where all the highest nobility are educated, contains about one hundred and twenty pupils, and the system of education pursued there, with the assistance of the ablest professors in Tuscany, is said to be, both in an intellectual and moral point of view, of the very best kind, and the conventional restrictions and religious requisitions to be liberally understood, although none, of course, can be admitted who do not conform to the Catholic ceremonies—a regulation which can hardly be felt as a grievance, as there is probably not a single properly Tuscan family belonging to any other communion than that of the church of Rome\*. In the six remaining convents, (2.) *Ripoli*, (3.) *Gli Angiolini*, (4.) *S. Agata*, (5.) *Le Mantellate*, (6.) *Il Conventino*,—all within the city, and at a short distance from it, (7.) *Le Quietè*, the plan of instruction is similar; but smaller funds do not allow of equal advantages being enjoyed by the pupils. At the *Annunciata* board and a full course of instruction cost nearly four hundred crowns (100*l.* sterling) per annum to the parents. There are about seventy pupils. Several of the highest noble families in Tuscany have recently adopted the system of *domestic* instruction, with the assistance of

\* Exceptions to this remark can hardly be said to be formed by the *Jews*, who are pretty numerously settled at Leghorn, or by the few *Protestant* families from the Swiss Canton of Ticino settled in Florence, and for whose benefit the Swiss pastor has lately begun to preach once in six weeks in the *Italian* language instead of *French*, which is in Italy the language of Protestantism.

the attendance of masters. Where the mothers of families are themselves well educated, as they are rapidly becoming, this plan may be attended with some advantages, although, as far as the observation of the writer has extended, bitter disappointment has been the result of the pleasing theory of an *exclusively* domestic education. Having described the nature of female education in Tuscany, our next inquiry is what are its results? The beneficial influence of woman on the society in which she lives, is infinitely more in proportion to her moral than to her intellectual superiority. He who has a heart to be a genuine admirer of this fine country with its interesting inhabitants, will shed proportionably bitter tears over its stains, and hail with delight every appearance of improvement.

The best-informed natives agree in affirming that infidelity to the sacred ties of the conjugal, and consequent neglect of the no less sacred duties of the parental, relation in either sex, is no longer a fashionable and uncensured crime. Public opinion is daily and hourly acquiring strength to brand it with merited disgrace, however highly its forehead may be raised. The reformation of public morals requires a purer and a more affectionate hand than that which raised the lash of a Juvenal or an Alfieri, and it is consolatory to know that Tuscany is *beginning*, although but beginning, to supply her great want—that of moral writers themselves above all stain or suspicion. In confirmation of this remark, several articles in the ‘Antologia’ of Florence, for the years 1828 and 1829, and the number for September, 1827, may be appealed to, the writers of which are known to the public; and several little tracts, which (without any society to direct them) are flying about the country, and arousing the attention, it is understood, of the hitherto lethargic or contemptuous *fashionable public*. Exquisitely beautiful in style is the little anonymous publication, well known to be the production of Professor *Mori*, of Siena, entitled, ‘A Letter of Advice from Philetus to Theodora, on the eve of her Marriage.’ Are we to consider the fact, that this valuable little publication appears not only anonymously, but without place or printer’s name, as an indication, that in the pure and lofty region of morals, as applied to human practice, the Tuscan muse makes her way with timid steps, and blushing to return to the right path? Has, then, the pulpit been silent? No; but it has thundered idly, because it has done nothing but thunder.

Tuscany boasts the names of several ladies of distinguished

talent now living. (1.)\* The Signora *Rosselini*, of Florence, is an elegant writer of comedies. (2.) The Signora *Pulli*, the daughter of a merchant at Leghorn, is an improvisatrice of interesting tragedies, some of which have been published. (3.) *Marchionni* is admired all over Italy, for a very rare talent in an Italian, that of comic acting. (4.) *Internari* possesses astonishing powers as a tragic actress, and is said to be a woman of very superior intellectual endowments and acquirements. (5.) The Signora *Mazzei* is a lady of considerable learning, having been in early life an improvisatrice in Greek.

As the talent of improvisation is nearly peculiar to the Italians, and in Tuscany is more frequently possessed by the fair sex than by men, it may be proper to introduce in this place a few observations respecting it. As exercised by the beggars in the great square of Florence, it is a mere jingle of rhymes, although certainly the interminable abundance and facility of their production is very wonderful. Those who exercise this talent among the cultivated classes, and who reason or attempt to reason upon it, describe it as being ‘rather a gift of the tongue than of the understanding.’ It is not very easy to affix precise ideas to this account of the matter. But although what is thus delivered has often all the advantage of premeditation, yet were the speaker to pause even a moment to consider what he should say, he would be infallibly lost. The machine is wound up: it must go on until it is down. Perhaps by pausing and giving way to the idea of difficulty in the undertaking, that courage and presence of mind would be lost which are the first essentials to success. The Signora *Mazzei* possesses the superior and incalculable advantage of a mind richly stored with the facts and images of real and fictitious history, ancient and modern, and she is enabled to entertain the parties whom she invites for this purpose, with such endless variety as to lead one of them to observe, ‘it is much easier for you to execute the tasks imposed on you, than for us to find subjects for you.’ The first time the writer heard this lady, each individual, in a company of twenty persons, was invited in turn to give her a subject, of whatever kind. The strangest, and apparently least poetical, were selected by many. One of these was, a husband awaked by the cries of his children, lamenting that he is married. The next task was, having fourteen

\* The succession of numbers here and elsewhere employed is not intended as an *order of merit*, but, by catching the eye of the reader, to furnish him with a ready answer to the question which is so frequently asked, ‘What distinguished persons are there now living in Tuscany?’

rhymes given, to complete the lines, and to do this five times successively, each time treating of a different subject, selected by the company. The next was, to describe the character of Filippo Strozzi, the ‘Cato of Tuscany,’ who, although one of the wealthiest men in Europe, refused to be called anything but Philip. The next was the captivity of Tasso; then the persecution of Galileo; then the fifth act of a supposed tragedy on the history of Galeazzo, Visconti of Milan. This surprising exhibition of talent continued for about three hours; and although the whole was performed with as unvarying regularity and promptness as if the result of machinery, a powerful and highly cultivated presiding mind was shown throughout.

The cultivation of such a talent as this cannot be deemed a frivolous or useless occupation of the time of the Tuscan ladies. The pens of many whom we have no opportunity of naming are likewise busily employed in translating the works of Miss Edgeworth, Miss Hamilton, and other English writers, the Conversations of Mrs. Marcet on scientific subjects, &c. They have still, indeed, a great want, which it may require perhaps a century of their present improved condition to supply,—to have a Hannah More, a Baillie, a Barbauld, amongst themselves; and the first step towards this will no doubt be, to acquire, what their present education and habits, improved as they are, still deny them, a genuine relish for the simple beauties of nature.

As the public charitable institutions in Tuscany are, for the most part, under the direction of Government—not of individuals, they are shut out from one extensive field of exertion, which is open to British females. Many ladies of rank, however, become Sisters of Charity, a society that requires no vow, and they are indefatigable in visiting the sick. It is they, too, who are the most exemplary in the discharge of what they deem to be the duties of religion, who minister most freely of their substance for its support, and who fill the churches, which, except in Florence, are almost forsaken by the men.

#### IV. *Education of the Civil Professions.*

In considering the education of the clergy and the nobles, we have seen distinguished talent occasionally struggling with success against the depressing effects of a defective system of early instruction. In contemplating that of the two learned civil professions, law and medicine, a more uniformly pleasing subject awaits us; and particularly in regard

to the former of these, we shall find a good education producing its natural fruits.

The Tuscan advocates, springing from a class over which superstition and prejudice have the least influence—the middle rank of life, are placed at once by their parents under the best instructors abroad, and receive the greatest advantage from the conversation which passes under the paternal roof, which is generally conducted with a considerable degree of freedom, and relates to the most interesting subjects which can engage the youthful mind. From the best school their neighbourhood affords, which is usually that of the exemplary monks of the Scuole Pie, they pass to the University of Pisa, or that of Siena, where they are required to spend six years in legal and other general studies, previously to their taking the degree of doctor of laws, which is necessary to their practising as barristers, and the examinations for which are very rigorous. The two Tuscan Universities afford the best possible advantages for the acquisition of legal knowledge, and, as far as the young advocates are concerned, they may be considered as, generally speaking, places of industrious and well-regulated study. Thus trained, they are fitted to adorn, and are freely admitted to, the first circles of society, and acquire a polish of manners, and the sentiments and feelings of a thoroughly polite man, in a degree which is rarely to be met with amongst the *nobles*. Their character is no doubt much influenced likewise by the nature of the legal institutions of the country.

The Tuscan code of laws has for the last sixty years been undergoing a nearly uninterrupted process of simplification and improvement, from the mass of confusion and chicanery in which the illustrious Grand Duke Leopold found them in the middle of the latter half of the eighteenth century. Many of the institutions of this great legal and ecclesiastical reformer are still in force. Some of the improvements introduced by the French have likewise remained untouched, and some further progress was made during the reign of the late Grand Duke, Ferdinand III. And although the system still admits of much delay of justice, abuse and corruption, it furnishes a full and unrestrained scope to the eloquence of the advocates, and secures in general that consent of public opinion which is necessary to give their most powerful sanction to its decrees. Almost as soon as a supposed delinquent is thrown into prison, an officer, styled the chancellor, begins the examination of witnesses, which, being committed to writing, forms the basis of his own judgment and that of his colleagues on the day of trial. These examina-

tions, which are private, are conducted with all imaginable diligence to elicit the truth, and until the chancellor thinks he has sufficient ground for forming a judgment, the trial may be continually postponed, greatly to the injury of the prisoner, whether innocent or guilty; for, in the former case, he unjustly suffers as a culprit; while, in the latter, a punishment is inflicted on him which forms no part of his sentence. We have heard of trials for murder being delayed in this way for a year and a half, until light at length broke in upon the chancellor's mind; this we regard to be the crying evil of Tuscan legislation, especially as the chancellor is not obliged to take these examinations in person, but may conduct the whole by his clerk. The eliciting of the truth may be in this way further delayed, or its evidence obscured by the want of skill in the examiner. When the chancellor, who here acts the part of a grand jury, has *returned a true bill* against the prisoner, the evidence of his guilt must be studied by a judge, called '*il relatore*', in order to prepare himself to give an account of it to his colleagues on the day of trial. They are five in number, sitting together, and the prisoner being released from his chains, is placed before them, not to be tried, but to hear his trial read. In cases of capital crime, the prisoner may, however, on assigning reasons satisfactory to his judges, call for any witness, and have him examined over again by the chancellor in his presence. But this privilege, perhaps through fear of aggravating his case, is, in practice, scarcely ever resorted to by the accused. After the reporting judge has read the *procès verbal*, the *fiscal advocate*, or public accuser, gives the judges his opinion as to the nature of the crime, and the punishment required by the laws. But he is strictly prohibited (according to an admirable provision) from indulging in exaggerated statements, or appealing in the slightest degree to the passions of the judges. This part is left to the advocate of the accused, who next rises, and if the case be one of interest, gives free scope to whatever talents for argument or declamation he possesses. The public is freely admitted, and the writer has listened for many an hour with delight to the eloquent harangues of Carlo Cantini (since made a judge), who during the years 1827, 1828, was in the height of his brilliant career. In one instance, at the conclusion of a three hours' speech of his, in defence of a youth accused as accomplice in a murder, a distinct peal of applause was extorted from the advocates and the audience, of which an instance was not remembered in the criminal court of Florence. It was peremptorily suppressed by the presiding judge, and prosecutions were after-

wards entered against several individuals who had taken part in the expressions of approbation ; but these were merely formal, to save appearances ; and a more effectual remedy was adopted a few months afterwards, by raising this meritorious young advocate to the bench. The fiscal advocate rarely avails himself of his privilege of reply to the defence, or if he do so, limits himself to the correction of matters of fact ; and the judges then retire and give their sentence at their leisure, but in common cases before another trial is begun.

The Tuscan criminal code is considerably milder than the English, and is enforced with equal or greater lenity. To all but cases of atrocious murder, the Grand Duke is open to applications for pardon, and after considerable delay, entreaties (it is said of those of the Grand Duchess) often prevail in cases where a stricter execution of the law would better have answered the ends of public justice, and have had a more favourable influence on the public morals. Highway robbery and house-breaking, as well as premeditated murder, are punishable with death. In a quarrel where implements not coming under the description of arms (such as knives, &c.) are employed, murder is punished with the galleys at Pisa, or with banishment to the unhealthy marsh district of Grosseto. In cases of death arising from duel, if the *challenger* is killed, the punishment is seven years of the galleys ; but if the *challenged*, fourteen years. Atrocious crimes are exceedingly rare, except in the comparatively uncivilized district called the *Tuscan Romagna*, bordering on the Bolognese territories of the Pope, where murders are sometimes attended with circumstances of almost inconceivable horror. Robberies are also common at Leghorn, where there is a great concourse of strangers from all parts of the world.

The *civil* legislation of Tuscany is far more defective than the criminal, giving occasion to much delay and expense. Lawsuits are sometimes prolonged for ten years, and one case is talked of which lasted twenty.\* This circumstance is principally attributed, at present, to a change which was unwisely introduced into the code at the restoration, previously to which period the French system prevailed, according to which what is called the '*incident*' to a suit (which we may interpret by what is known, by grievous experience, to our Chancery suitors under the name of question referred to the Master) was argued and decided by the same judges, and, if time allowed, at the same sitting with the suit

\* But what is this compared with the delays of our own Court of Chancery ?

itself ; whereas, according to the present *restored* system, the *incident* becomes a suit within a suit—nay, even may itself contain an incident which must be tried in another court, and upon its separate merits.

A Tuscan advocate, in pretty good practice, may be sure of making 1000 crowns (250*l.*) per annum, upon which he can live genteely ; and there have been instances of men in the receipt of 6000 per annum : so that an elevation to the bench, with a salary of only 800 crowns, is not coveted by any who are in good health and in the prime of life. The most celebrated Tuscan advocates since the elevation of *Cantini*, last year, and the death of *Collini*, a few months ago, in the plenitude of literary and legal honours, are—  
(1.) *Aldobrando Paolini*, editor of an edition of the celebrated work of Beccaria, with a great variety of original dissertations and commentaries ; of a Treaty on Commerce, under the French regime ; a Life of Pignotti, the celebrated historian of Tuscany ; and a Memoir addressed to the Society of the *Georgofili*, *against* the measure of the Government for the valuation of estates, but *published by order of the Government*, the history of which is too singular and too illustrative of the state of things under the government of the Tuscan princes to be omitted. Previously to 1817 the valuation of estates, with a view of imposing the land-tax, was effected by a commission to inquire into the average value of land in each commune (or district, including one or more parishes according to their extent), but without power to question on oath any individual respecting the value of his *own* estate. But, in the above year, the Grand Duke Ferdinand III. established an office in the capital for the registry of the value of each individual estate in Tuscany, called *l'ufficio del Catasto*, with power to examine by commissioners on the spot each individual, should they judge it necessary, annually upon the value of his estate. This measure was met by the bold young advocate both with argument and ridicule in his essay, read on the 8th July, 1821. His chief objection was the clog it imposed upon agricultural improvement, by making a man immediately pay for any benefit he might confer on the public in this way because he also benefited himself. The delivery of this essay no sooner reached the ears of the Directors of the Catasto than they made vehement complaints to the Grand Duke of the audacity of the man who had called in question a measure of the government, and required that signal punishment should be inflicted on the author. The Grand Duke complied so far only as to require the author to give the Catasto

a copy of the manuscript. To make the matter more imposing, perhaps, gens d'armes were sent to his dwelling to demand the *Essay*, but when the Directors, after having read the work and pronounced it to be both absurd in itself and injurious to the Grand Duke, required proceedings to be instituted against him, Ferdinand replied that the best punishment would be to publish it, that the public might judge of its demerits, which was accordingly done at the expense of the Government, without any comment except a short advertisement, stating that, as previously to the adoption of the present system, the Academy of the Georgofili, including Paolini, had been invited freely to communicate their sentiments to the Catasto, this office considered itself unfairly used in having its measures publicly criticized after they had been for some time in force. So singular a turn do affairs sometimes take under a *mild*, perhaps it will be said a *weak*, despotic government.

The system of the Catasto appears to be an oppressive one; yet all the measures of Government are carried into effect with such a wonderful degree of good humour and lenity, as to hush the rising complaint on the lips of the subject. (2.) *Baldasseroni* is author of a work on commercial duties, which forms a text-book in the Courts, as do the works of *Collini* in the Colleges. (3.) *Carmignani*, of Pisa, is author of a course of lectures on criminal jurisprudence, and of many essays on various subjects of literature. (4.) *Cremani* was formerly Professor at Pavia, and is author of a course of lectures on criminal law; but his memory will long survive him on a very different account. He was Minister of the Home Department (*Presidente del buon Governo*) in the year 1799, during the retreat of the French, and instituted prosecutions against all those who had manifested republican principles by any open acts of adhesion, to the almost incredible number of 24,000. Many were brought to trial, and all were imprisoned: none were put to death, because capital punishments had been abrogated by Leopold thirty years before, and his laws were then still in force. (5.) *Gillies*, whose family is of English origin, is a much admired pleader at Florence, as also are (6.) *Benassi*, (7.) *Capputti*, (8.) *Landrini*, and (9.) *Cerciniano*. (10.) *Galassi*, of Leghorn, although young, promises a most brilliant career. (11.) Doctor *Guadagnoli* is not distinguished as a lawyer, but is the author of a poem entitled '*Il Naso*', which is full of learning and humour, a style which is perfectly new in Tuscany.

All resident subjects in Tuscany, whether natives or

foreigners, laymen or ecclesiastics, pay the same taxes and are amenable to the same laws. The clergy are entitled to no tithe on the produce of the soil, unless, in the comparatively rare case, that they can prove that their annual professional receipts from their parish do not exceed 80 crowns per annum (20*l.* sterling), which is deemed a sufficient maintenance; so that one great source of employment to ecclesiastical lawyers is cut off.

The criminal court of Florence has jurisdiction over the whole Grand Duchy, except Siena, Piombino on the borders of the Roman States, and the Island of Elba, which have separate jurisdictions. There are fifteen criminal judges at Florence, ten of whom sit in two bodies of five at a time, in turn, and the remaining five form, by the nomination of the President, a third court of revision, when a new trial is moved for and obtained by the advocate of the accused, which may be done on the ground of informality or partiality, *i. e.* if one court of five judges can be proved to the satisfaction of a second court of five to have decided partially or irregularly, a third court of five, different from the other two, hears the cause again; so that the matter comes before the whole judicial body in the course of the proceedings. The civil court has four judges.

As the advocates have the greatest influence on the general literature of Tuscany, this is, perhaps, the most suitable place to introduce a few particulars in relation to it. This class of society are the principal supporters of the *Anthology of Florence*, a monthly publication devoted to science and literature, conducted with great ability, displaying extensive information, and written in the most elegant style. It sells 1500 copies. A monthly journal is likewise conducted at Pisa, in the English language, called the 'Ausonian,' with the view of conveying to the English in Italy and at home correct ideas of the progress of Italian literature. There are likewise in Florence, and in many other towns, small 'Accademie,' as they are called, chiefly supported by the young advocates for purposes of general literature. The writer has attended, with great interest, a society of this kind at Florence, for the explanation of Dante's poems. The Academy of *La Crusca* is made up of various classes of society: it has nineteen resident members, who receive a small salary from the Government, and an indefinite number of corresponding members. The *Accademia Valdernese* holds its meetings in different towns in rotation. The *Accademia Tegea* of Siena has done much for the diffusion of natural science. Every city and considerable town in Tus-

cany has its academy of science and literature under the patronage of the State, besides new societies which are frequently arising in private life.

The University of Siena contains, in the present year, 300 enrolled students, of whom 200 are legal students, 80 destined for the profession of medicine, 20 to be apothecaries (*i. e.* authorized dispensers of medicine), and only 20 who have various miscellaneous objects in view; but no account is taken of such students as merely attend the lectures. The salaries of the Professors amount to about 300 crowns, besides a small sum proceeding from fees for additional lectures in their own houses: they are twenty-three in number.

At Pisa there are 800 students; about 50 of these are young Greeks. There are now twenty-nine Professors, whose salaries amount to nearly 600 crowns each. At all the seminaries and colleges the sum demanded of students is so low that it may be considered as only an equivalent for board. Instruction is uniformly gratuitous. At both the Universities scholarships have been founded, to the benefits of which students are admitted by examination. At Siena, the "luoghi Berlingucci" are exhibitions enabling students, after taking degrees, to prosecute their studies for six or even ten years at foreign universities. Some have gone to Edinburgh, and have been maintained there in this way for several years.

The education of *physicians* and *surgeons* in Tuscany is very complete, as far as professional knowledge is concerned, although they fall far behind the advocates in general knowledge and cultivation. Like that of the legal, the education of the medical profession is carried on to great advantage at the Universities of Pisa and Siena. But the Medical and Surgical College, connected with the Hospital of Santa Maria Nuova, at Florence, is the best medical school in Tuscany. As this institution, munificently endowed by the Government and by individuals, contains beds for 2000 general patients, besides a lying-in hospital and a lunatic asylum connected with it, and a foundling hospital in its immediate vicinity, it affords ample opportunities for the study of the various stages of actual disease; and the bodies of all patients dying in the hospitals being given up indiscriminately to the purposes of science, furnish the necessary variety of subjects, without driving the students to odious and demoralizing means of obtaining them.

In chemistry they enjoy the benefit of the services of Professor Gazzetti, who, to scientific exactness and a tasteful

delivery, adds the charm of the purest Tuscan style, a flowing diction which never wants nor needs to alter a word or syllable. To be present at his lectures is one of the highest treats which this city affords to the stranger. He has published two volumes 8vo. of his lectures, and a variety of minor scientific pieces on subjects relating to the connexion between agriculture and chemistry, &c.

In pathology and physiology, *Magheri* is also distinguished. He is most felicitously graphic in his descriptions, which serve as an admirable substitute for the presence of the objects themselves; classical in style, and impressive in delivery. The want of a good text-book, as a guide to the private studies of his class, is much felt by them, and the Professor has it in contemplation to supply this want by the publication of a compendium of physiology and pathology from his own lectures. He is much to be admired for that rational and philosophical *morality* which runs through the whole of his lectures, and strongly attaches the students to his person. Such professors as Magheri are needed to effect the moral regeneration of Italy.

*Betti* is an able lecturer on ‘surgical institutes,’ comprising operations on the dead subject. He has lately (May, 1830) accepted the direction of the Lazaretto of Leghorn.

But by far the most instructive tongue in the College of Florence is one which fanaticism and prejudice have lately succeeded in silencing—we refer to Professor *Philip Uccelli*, whose lectures on comparative anatomy the writer listened to, in the spring of 1828, with unmixed satisfaction. More curious matter, comprised in fewer and better chosen words, he never heard. His offence was his candidly explaining and discussing in his lectures, but with an obvious leaning towards it, the phrenological system of Gall and Spurzheim. The publication of his course of lectures, in 1826, having rendered the good or evil of more extensive influence on the minds of the medical students, the alarm was raised by the priests, and the Grand Duke was with great difficulty persuaded to refer the matter to the Theological College of Pisa, who reported, in September, 1828, that the sentiments contained in these lectures rendered it undesirable that Professor Uccelli should any longer have the direction of the studies of the Tuscan youth. Uccelli was, therefore, silenced, but, at the same time, made Emeritus Professor for life. With such tenderness is every arbitrary act accompanied in Tuscany, that the people cannot find in their hearts to be angry.

Siena also enjoys great reputation as a school of medicine, especially since the reforms introduced into the discipline and modes of study in the University, and all the numerous other institutions for education in this city, by the influence of the late intelligent and excellent Governor *Bianchi*.

*Vaselli* is here an able, distinct, and patient lecturer and demonstrator in anatomy, as is *Mazzi* on the institutes of surgery and forensic medicine.

*Stanislaus Grotanelli*, clinical professor here, had obtained high reputation by his medical tracts on the spleen and on other subjects while settled at Florence. His manner as a lecturer, both at the bedside of the sick and in the chair, is marked by that easy familiarity which encourages the pupil to become his own instructor, by obtaining solutions of those particular doubts which press upon his own mind, and which stimulates to the successful study of science from feelings of attachment to the instructor. This last remark is, in a considerable degree, applicable to the other professors of this University, eight of whom the writer has heard lecture. He found Professor *Puccioni*, in canon law, literally a peripatetic philosopher, walking about his class-room, encouraging the timid (who might have been deterred from speaking aloud from their places) to propose to him their difficulties, in order that the whole class might receive the benefit of the further illustration of the subject which they drew forth. In order to learn how far professorial pomp may with safety and advantage be laid aside, and the affections of the student won to his studies through the person of his teacher, a visit must be paid to the University of Siena.

To the *non-medical* observer, who is anxiously noticing every symptom of intellectual, and, above all, of moral improvement in Tuscany, perhaps the greatest service which Doctor Grottanelli has rendered to his country will appear to be his publication of an introductory lecture to his course, entitled '*Sopra il Giuramento d'Ippocrate*', in which the moral bearings of the medical profession are pointed out with a degree of taste, judgment, and good feeling which we have never seen equalled, and which render it desirable that this little work should be in the hands of every English as well as every Italian student of medicine.

The most celebrated physicians in the capital at present are—(1.) *Torrigiani*, who has the title of *Archiatro*, or principal physician ; (2.) *Cassini* ; (3.) Professor *Nespoli* ; (4.) *Bruni*, celebrated for his skill in lunatic cases ; (5.) *Lazzarini* ; (6.) Doctor *Appolloni* enjoys great reputation at Pisa, and has published several medical works ; and (8.) *Studiati*,

of Pisa, is a much admired lecturer on pathology. To these must be added those physicians and surgeons also mentioned, (9.) Grottanelli, (10.) Magheri, (11.) Betti, (12.) Uccelli.

The examinations for degrees are conducted by twelve physicians and twelve surgeons. The expense of fees for diplomas in medicine, as in civil and canon law and theology, are about 10*l.* When the student is of the Catholic communion, a confession of faith is required of him, and the diploma runs in the name of the Archbishop of the diocese, who is patron of the Universities; but when the student is not a Catholic no confession is required, and the diploma runs in the name of the Prior of the University, who is a layman. As doubts have often been expressed as to the extent of liberality shown by foreign Catholic Universities, the writer thinks it proper to add that he has *seen* the diploma of a Greek physician received from Siena, under the above circumstances, without confession, and running ‘*Nos Stanislaus Grottanelli*,’ &c., that physician being then Prior of the University, instead of the usual ‘*Nos, &c. Archiepiscopus Sanensis*.’ No other confession, or act of conformity, is required in the course of studies; and it would be well if even this were abolished, for, although there can be no hardship in requiring a Catholic to say that he is a Catholic, where is the reasonableness of requiring him to do so as a condition of becoming a physician or barrister?

The degree of LL.D. is not granted, as in Great Britain, to denote general literary merit, or merely as a compliment to great men; but many persons study civil law, and take the degree, without intending to practise the legal profession. This was the case with the celebrated Pananti, known for many years in London as theatrical composer, and who, since his return to Tuscany, has done essential service to the purity of his native tongue by the publication of three octavo volumes of prose and poetry, which have received from the Academy of La Crusca the stamp of *classical*.

#### V. *Education of the People.*

Our readers will remember that, in the course of the discussions to which Brougham's celebrated bill for the improvement of education gave rise, that learned gentleman affirmed that sufficient sums had been provided by our pious ancestors, if well and fairly employed, to afford gratuitous instruction in Latin and Greek to every male child in England and Wales. It is the opinion of persons well ac-

quainted with Tuscany, that the same observation might be made with respect to this country. But, alas ! how are the benevolent intentions of those who went before us frustrated by the negligence and corruption of the present generation. The confraternity of the *Misericordia*, for visiting the sick, burying the dead, &c., appears, after all, to have acted the wisest part, for it spends within the year all, or nearly all, that public beneficence has bestowed upon it during that period, and is, notwithstanding, the richest of all the charitable institutions in Tuscany, the public beneficence having never failed it for six centuries.

Compared with any of the Catholic countries of Europe, Tuscany may certainly be said to contain a well-informed population. It is true that, in the remote parts of the country, there still are many persons unable to read or write ; and they might be regarded as brutally ignorant, were it not that, by being surrounded on all sides by well-informed persons,—by going several times a week to market, at some town, for the sale of their commodities,—by attending country theatres, where the finest compositions are recited and placed in action before their eyes,—and by hearing the works of their classical authors repeated by heart by some of their neighbours, together with a natural quickness in availing themselves of whatever means of knowledge may happen to come within their reach, they acquire a great superiority over the uneducated portion of all other countries. We have known several excellent reciters of Tasso, Metastasio, and Guarini, who were bungling readers of those authors, and, although almost destitute of education, it was evident that their minds were considerably enlarged by the familiarity they had acquired with them. It should likewise be remarked that the Italian language presents greater facilities for self-instruction than, perhaps, any other in Europe ; for the labour of learning to read and write well arises principally from the difficulty of spelling, and, in Italian, every syllable, with scarcely an exception, being pronounced as it is written, orthography becomes the simplest acquisition possible. The Tuscans may be described as being the earliest enlightened, and, to this day, the most enlightened people of modern Italy. This is evinced by the fact that their language is become the language of Italy, and from the circumstances under which this took place. The modern French is the dialect of Picardy, diffused throughout the whole kingdom as a badge of the political supremacy of Paris and its adjacent country over the conquered provinces. The Greeks, the Romans, and the Saxons carried with them their languages, as a matter of

course, into the countries they subdued by their arms. But Tuscany, without any political ascendancy to operate in her favour, has spread her dialect from the Alps to Reggio and Syracuse—a plain proof that it was the language of learning and the arts, of civilization and refinement. This country, too, has the advantage of being, for the most part, undisturbed by those tumults and fruitless attempts at change of government by which, in other countries, the progress of improvement has been arrested. They enjoy, in practice, that freedom after which the other people of this peninsula are panting, and are perfectly in unison with their governors. The public spirit in Tuscany is completely monarchical. Republican ideas ferment in the minds of only a few isolated individuals of little influence, a circumstance which enables the sovereign to rule his people with gentle sway. In 1821, when all the rest of Italy was burning to throw off, or had actually thrown off, the yoke of despotic power, in Tuscany only one secret lodge of Freemasons was discovered which aimed at the establishment of a constitution in place of the arbitrary authority of the Grand Duke. It was composed of heads not having any influence over the nation at large, either from property or talent, youths of from eighteen to twenty-one years of age. The government was satisfied with imprisoning them for a very short time, and then, without trial, conducting them home to their parents, with an admonition to the latter to take better care of them in future. Several of the old Freemasons are at this moment in the employment of the government of Tuscany—one is a judge, another a professor.

So rare are capital crimes in Florence, that, in twenty-five years, there have been only two murders committed, and both of those by Romans. There is in this country not a single cavaliere d'industria, who so much infested some parts of the Roman and Neapolitan states, until the Austrians, in a great degree, suppressed them. In the autumn of 1827, when two persons, on two successive nights, were knocked down and lost their watches near the Ponte Vecchio, at Florence, the whole city was in confusion and horror at so unheard of an atrocity!

Although the plaiting of Leghorn straw, the making of carpets, cloth, silk, porcelain, and some other manufactures, employ a considerable number of hands in the country, the principal employment of the common people is agriculture, and they live for the most part in great comfort: for either they are tenants, and, under the name of factors, enjoy half and usually the best half of the produce, so that it has passed

into a proverb, *Fattore, FATTO-RE'*, the factor is the king ; and the more numerous his family is the better, for the more cheaply can he cultivate the land he occupies, which is sure to provide sustenance for them all ; or he is a little proprietor, and enjoys a moderate and comfortable independence ; or if a day labourer, although his wages be small, his employer will hardly allow him to go to bed without a good supper and a pint of the inferior wine of the country. The city of Prato employs many hands in the cloth and other manufactures, but in general the artisans of each district work only to supply the demands of the district itself. The Leghorn-hat manufacture is flourishing, and employs 20,000 hands chiefly in the small towns of *Brozzi*, *Legnaja*, *San Domino*, and *Campi*, in the neighbourhood of Florence, along the road to Leghorn. The ancient silk manufactures, once so famous at Florence, Siena, &c., are very much in decay.

The manners of the country people are simple and innocent. The ceremonies of religion are for them a principal object in life. The festivals (and by festival is understood the mixture of religious ceremonies with public games, fireworks, and every kind of rejoicing) are of annual occurrence on the anniversary of the patron saint of each parish or commune, as well as those specially set apart by the church for the observance of all its members. The passion for the theatre is here not only harmless, but probably highly favourable to the national morals, and is so absolutely universal that the lame beggar, as soon as he can get twopence, will hobble away to the twopenny theatre, where, in Florence, he may weep over a tragedy of Alfieri or Niccolini. The humanizing effect of the theatre in this portion of Italy arises from its language being that of the people themselves, whereas, at Genoa and Naples, pure Italian is but imperfectly understood by the lower classes. It is astonishing how perfectly decorous as to morals and order, and how respectable in point of talent, a twopenny dramatic representation is in Tuscany. Where the town is too small to support a theatre even of this humble class, the inhabitants form a theatre of dilettanti, and sing or act either within doors or under the canopy of heaven—anything rather than have no theatre.

Gaming is not a Tuscan passion. The nobility are led into it by their visitors from the Palais Royal and St. James's-street ; but the amusements of the common people are inexpensive and harmless. The most that is risked is a bottle of

wine, for the most part to be drunk in common by the winners and the losers.

Servants and the common people in the large towns can generally read and write ; and it is the fault of parents if they do not learn to do so in the country, as the provision for gratuitous education is universal. Besides the schools for elementary instruction, including Latin, which every commune (*comunità*) is obliged to maintain, there are thirty Lancasterian schools for boys and girls scattered over the country, of which the monks of the Scuole pie, who were at first hostile to them, are now friends and patrons, having, since November, 1828, adopted the system themselves in one of their schools at Filigne. In every one of the six sections of Florence, and in the corresponding divisions of other towns, there are likewise gratuitous schools, *well conducted*, as the consequence of their being under the immediate influence of public opinion. And there is a noble institution where 800 girls are boarded, and taught, and provided for in future. The very *Casa di Lavoro*, House of Correction, now has a respectable school attached to it. Wherever the nuns have a conservatorio for young ladies, they are obliged likewise to keep an open school for reading, writing, and work for the lower class, the nuns of Florence being alone excepted from this obligation in consequence of the abundant provision otherwise made here for gratuitous female instruction.

The good people of Tuscany, it may readily be supposed, are not without their superstitions. In country places there are not wanting believers in the power of magicians, sorcerers, and witches ; with whom the number 5 is unlucky, and 13 brings death ; who believe that the birds not only figuratively but literally sing the praises of God, because the preacher tells them that they do sing his praises ; who pay to the images of saints a kind of worship which the Church forbids, *i. e.* direct religious homage, and who regard church bells with an undefined reverence. But if these prove a feeble, they are no indications of a corrupted mind ; and amongst nations equally civilized, it may be safely affirmed there is none more orderly or more free from great vices.

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### VILLAGE SCHOOLS OF INDUSTRY.

Proposal for the Establishment of Village Schools of Industry, submitted to the consideration of Landowners and Clergymen. London. 1831.

THE object of this proposal appears to be, to effect changes in the mode of educating the children of labourers and of the poorer classes of workmen and tradesmen, not very dissimilar from those which have already been recommended in this Journal (No. II.); for the fundamental principle of the proposed schools is, 'that every labourer should be taught all the knowledge which bears immediately upon his situation.' The proposers also enforce with great earnestness the truth, that labour is not only valuable as a source of wealth, but is the only means of acquiring or of preserving virtuous and religious habits. It is indeed no exaggeration to say, as a proof of the vital importance of making the acquisition of industrious habits a chief object of early education, that habits of industry and labour are powerful auxiliaries in the suppression or restraint of depraved desires. Human nature is so constituted, that idleness is, in almost all cases, the parent of some form or other of vice; so that to instruct young men and women in useful labour, and to secure to them certain advantage from it, and thus train them to rely upon it as a source of support, comfort, and independence, is an object worthy of the deep consideration of those who, by their position as proprietors of land, or by their profession as clergymen, have it in their power to promote it. Those who are really acquainted with the ordinary attainments and ordinary feelings of the poor, and are at the same time free from any desire to prolong the degradation of those born in humble stations, are alone to be entrusted with such a task.

Inconvenience is sometimes produced by attempts to act too precisely according to plans drawn up even with the greatest care for the advancement of benevolent objects. Every plan is formed by those who cannot avoid mentally applying it to a particular locality or portion of the community with which they chance to be best acquainted. When the plan comes to be acted upon in other places, or applied to the condition of other portions of the community, unexpected difficulties are necessarily met with, and discouragement is created; although the difficulties are commonly such as are removable by slight modifications of the original design. The discouragement is generally taken advantage of by the numerous inconsiderate, indolent, and selfish persons, who regard the introduction of *any* new plan, however good

in itself, as unnecessary, and who are glad to find an apology for pronouncing it impracticable and visionary. Whoever is desirous to establish village schools, must expect these difficulties ; but they are not such as should divert any philanthropic individual from persevering in what may be the means of effecting the most extensive and the most lasting improvement in the character and happiness of the many, whose lot it is to support themselves by the labour of their hands. If we are anxious to prevent the increase of pauperism and crime,—if we desire to see a population peaceable and contented, and to maintain the security of all classes of people in this country in time to come,—these ends will perhaps be best attained by reviewing the existing system of education for the poor, and considering whether it may not be so amended as to obviate evils which all acknowledge to exist, and which are certainly not of a nature to be spontaneously diminished.

The following are the heads of the proposal which has led to these observations :—

‘ I. The object of such a school is to make industry the leading feature : to make it subservient to the formation of character, and the acquisition of as much knowledge as may be deemed necessary : to render it beneficial to the neighbourhood, and to make it pay its own expenses.

‘ II. A piece of ground should be provided of a sufficient size, according to the number of children to be taken. It should be the property of the owner of the school ; or if on lease, the landlord should pay for all improvements at the expiration of the lease. A piece of waste land would not be objectionable (provided the soil were easy to cultivate), because it would be cheaper, and the result, if successful, would be more decided.

‘ III. A man should be hired to cultivate the ground, part with the plough or spade, part as a garden. He must be intelligent generally, and understand his business thoroughly ; he should be of a kind disposition, and should comprehend and approve the objects of the school ; he should undertake to communicate to the children all the knowledge he possessed, and consider their instruction as of still more importance than his manual labour—not, however, neglecting the latter ; he should direct their labour in the most useful manner, both for the garden and themselves.

‘ IV. A schoolmaster should be obtained for the direct teaching of the children. He must understand that the chief sphere of his teaching would be in the garden and work-shops—making himself acquainted with the processes going on, and with the principles of gardening and farming as well as the practice. By means of the interest which the child would feel in the objects before him—their nature and uses—much more would be learnt than through any system of book instruction not illustrated by visible and tangible

facts. The qualities and produce of the soil, and the habits of the animals fed upon it, would naturally become subjects of inquiry, and afford opportunities of useful information. The schoolmaster must work with the children. When the gardener points out the work required for the garden, the master must distribute the work, and superintend it. The children must work in groups, under monitors, as far as is possible. Each child must be employed, down to the very youngest, who must have some work allotted, as picking stones, sticks, counting cabbages, &c.

' V. The labour must be adapted to the age; and, regularly at stated hours, the children must adjourn to the school, or take lessons in the open air, according to the weather or convenience. There they would learn reading, &c.; great part of the lessons, exclusive of scriptural instruction, would consist of explanations respecting the objects, animate and inanimate, in the garden, taken from books adapted to this purpose. Besides gardening, the children should be taught such trades as local and other circumstances might render desirable: masonry, shoemaking, tailor's, carpenter's, blacksmith's work—netting, knitting, &c.: some of these might form also direct subjects of instruction.

' VI. The girls, under the direction of a competent female superintendent, should be taught household-work, washing, cooking, baking, &c. They should not be exempt from out-door labour—its healthiness is a recommendation for all.

' VII. A cottage must be found for the gardener and schoolmaster, but all the other buildings should be erected by the labour of those persons and the children. The convenience and comforts of the inmates should grow gradually, and in proportion to their own exertions. If instructed in classes, they might use any small room that could be obtained for their temporary accommodation. The first thing to be erected in addition would be a large shed. If this were begun on a proper plan, it would be enlarged by degrees till it answered every purpose. The children would soon pave the floor with stones, if directed. The building would serve for a school, for workshops, and for a place of exercise in bad weather.

' VIII. A great object would be to collect manure; cattle must be kept for this purpose, and every other means resorted to. The children might be usefully employed sometimes in collecting and fetching it from a distance. The parents might be encouraged to keep pigs, and be supplied sometimes with food for them, giving the manure in return.

' IX. Besides the regular work of the garden, &c., the children should have gardens of their own, of which the whole produce should be their own, to carry home to the parents. The children should be allowed to bring linen from home to wash, and to make articles of furniture for presents to the parents, or to mend any articles about the house.

' X. The objects of the school should be fully and patiently explained to the parents, who should be invited to second them. The privilege of purchasing the garden produce, as well as the manu-

factories of the school, at a lower price from the school shop, should be offered to the parents; and the rewards of the children should be composed of such articles as would be valuable to their families. Give the parents, in short, as great an interest as possible in the school, as experience pointed out the best mode of doing it. Let them feel the school to be, as it were, their own. Let them see that they reaped all the advantage, except in the gradual improvement of the property; but let this improvement benefit them in a *palpable* manner. Here they might bring their assistance, viz.—labour to the school, as a common fund; a *deposit* of labour, to be returned in produce, or in education to the children.

' Whatever trade a parent exercised, let him at his leisure time give his labour or instruction to the school. The complaint is, that the parent cannot get employment—then he would have more time to give to the school. Invite a stocking-maker, or weaver, &c., from an over-peopled manufactory, to settle near the school, teach the children his trade, work for the neighbourhood, and vary his labour, or work at leisure hours in the garden. His health, comfort, and character would improve. It would be easy to keep a labour-account of hours' work against every one who gave his labour to the garden; this would be valued and repaid in produce.

' XI. As the children would improve daily, and their labour become more valuable the longer they stayed, it would be right to enter into a contract with the parents, to continue the children at the school a certain number of years. This would not only repay the school more completely, but would promote the general objects of the establishment;—the formation of good habits, and the acquisition of practical knowledge.

' XII. Of course, tools of all kinds must be provided by the proprietor; the mode in which he would look for remuneration would be, the payment of the children, their labour in garden produce, and the permanent improvement in land and buildings. He would also form a collection of books for the school, containing the requisite information on the subjects of their labours.

' XIII. The Bible should not be made a class-book, but read at stated times as a book of divine instruction, and proper passages learned out of it. Doctrinal religion should not be taught in the school; but what is taught should be entirely practical, and made to go hand in hand with the work.

' There should be a plan of the garden and premises. This plan should be studied in the school, and would exemplify the elementary principles of land-measuring, &c. Each boy, as he grew old enough, should make one for himself on a reduced scale. The children should learn the distances, in feet, of all parts of the garden, and the number of square feet in the whole, and in each part; the plants growing in each bed, their number, value, &c. The children should be allowed to propagate plants for themselves, for pleasure or for sale; and in the course of time might have the means of erecting a green-house.

\* Exact registers should be kept of all the occupations and expenses of the school: these should form the study of the children, and from them the arithmetical sums should be chiefly taken.

\* XIV. A savings' bank should be established in the school for the children.'

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### THE STATE OF EDUCATION IN FRANCE.

In the year 1830, the Society for the Diffusion of Useful Knowledge addressed a series of questions to the *Société pour la Propagation des Connaissances Scientifiques et Industrielles*, on the present state of education in France. These inquiries have been answered in the most prompt and satisfactory manner by a written communication from the French Society, who have also printed their reply in the *Bulletin des Sciences Géographiques, &c.*, for November 1830. We conceive that we cannot express our sense of the great obligations which we owe to the French committee, in any better way than by communicating their valuable information to our countrymen through the medium of this Journal.

We give first each question that was proposed, and then the answer.

**First QUESTION.—What measures has the government taken for the education of the different classes of the community, and what kind of instruction has been adopted?**

**ANSWER.**—To answer this question, we must give a sketch of the different sorts of instruction, and the different kinds of schools in France. There are three kinds of instruction—primary, secondary, and superior. The primary instruction comprises those branches of knowledge which are indispensable, such as reading, writing, arithmetic, with some other subsidiary branches which are spoken of more particularly in the answer to Question 8. This instruction is given in the schools called Primary or Elementary. The secondary instruction comprises knowledge of a higher kind—Greek and Latin, history, geography, rhetoric, philosophy, elementary mathematics, physics, chemistry, and natural history. It is necessary to have studied these various branches, in order to obtain the degree of *bachelier-ès-lettres*, which degree is an indispensable requisite for admission to the courses of instruction, the examinations, and theses in the various faculties, of which we shall speak hereafter. For the present it will be sufficient to state, that a person cannot become an advocate, or a physician, or a professor in letters or science, or a graduate in theology, without being *bachelier-ès-lettres*. The *baccalauréat-ès-lettres* is in fact the certificate that the course of secondary instruction has been gone through, and the attainment of it is the condition on which a person is allowed to pass on to the superior instruction.

The secondary instruction is given in five kinds of establishments;

*royal colleges, communal colleges, private colleges, institutions, and boarding schools (pensions).*

The royal colleges are those in which the directors (*administrateurs*) and professors are paid by the state. In 1829 there were thirty-eight royal colleges in France. During the year 1829, we believe, two new ones were established. Further details will be found in the answer to the fourth Question.

The communal colleges are secondary schools maintained by the towns, their heads and professors being paid from the communal revenues. These colleges are very numerous in France; there are above 317. But all these colleges are not *de plein exercice*, by which term is meant, that many of them do not give instruction in all those branches of knowledge which enter into the secondary instruction. There are not more than 120 of these colleges which are *de plein exercice*. In a communal college, *de plein exercice*, a student can go through the complete course, as in a royal college; and on leaving this communal college, he can be admitted to the degree of *bachelier-ès-lettres*. If the communal college is not one *de plein exercice*, a student can only commence his course there; if he wishes to take his degrees, he must finish elsewhere. For example, one communal college may have no philosophy class; in that case the student, if he wishes to become a graduate, must go to some other establishment for his philosophy: another communal college may have neither a rhetoric nor philosophy class, and the student consequently must study rhetoric and philosophy in some other place, if he intends to graduate.

The private colleges are private schools, in which the secondary instruction is given complete; the directors and professors are required to have the same qualification as the same officers in the royal colleges. For the directors, this qualification consists in having obtained the degree of *licencié-ès-lettres*, or of *licencié-ès-sciences*; and for the professors, the title of *agrégé*. The answer to the fourth question will explain the meaning of the title of *agrégé*. Properly speaking, there are only two private colleges in France, that of St. Barbe, and that of Stanislaus. Both of them are in Paris. The state makes no allowance to these two establishments, which are supported entirely, as well as the directors and professors, by the receipts from the pupils.

The *institutions* are also private schools, founded with the sanction of the University. The head or principal of an institution must be *bachelier-ès-lettres* and *bachelier-ès-sciences*. The masters whom the principal employs are not required to have degrees; it is sufficient for these masters, who are called *répétiteurs*, to be approved by the rector of the academy. (The meaning of the term *rector of the academy* is explained under the second Question.) The institutions receive no aid from the government; they are purely private speculations. The institutions are divisible into several classes. Some are established in towns where there are colleges either royal or *de plein exercice*; others are established in other places. When an institution is established in a town where

there is a college either royal or *de plein exercice*, the principal is obliged to send the youths who are above ten years of age to attend the college classes. Accordingly the boys who are past this age are boarded and lodged in the institution ; and in the school-room of the institution they make preparation for their classes, the attendance on which takes place in the college. They have *répétiteurs in the institution*, but they attend the courses of the *professors of the college*.

The institutions established in places where there are no colleges, are of two kinds ; institutions *de plein exercice*, and institutions not *de plein exercice*. There is only a small number of institutions *de plein exercice*. They are those of Juilly, Vendôme, Pont-Levoy, Sorèze, Fontenay-aux-Roses. There may be one or two more. In the institutions *de plein exercice*, the secondary instruction is given complete ; and the youths who leave these schools are admitted, like those from the royal colleges, to the examination for the *baccauléat-ès-lettres*. We ought to remark that, according to the imperial decree which established the University, no institutions *de plein exercice* were allowed to exist, even in those places where there was no college. This decree forbade the principals of institutions to carry instruction beyond the *classes of humanities*. This prohibition was part of the monopoly system of instruction which the decree organized, and which the chief ruler considered as one of the main springs of his government ; but this monopoly has been gradually giving way since the overthrow of the imperial power, and has in various respects lost ground. This accounts for the successive establishment of various institutions *de plein exercice*, which are so many partial triumphs over the system of restrictions and privileges. Some of these institutions of which we have been speaking, assume the title of college ; but this is an unwarrantable assumption, because their principals and professors have not the requisite qualifications.

The institutions which are established in places where there is no college, and which are not *de plein exercice*, give an education more or less extended, but not complete. A student on leaving these establishments cannot become *bachelier-ès-lettres*.

Lastly, *pensions* are like institutions, houses for private education. They differ from institutions in two respects :

1. The master of a boarding-school (*pension*) is not required, like the principal of an institution, to be *bachelier-ès-sciences* ; it is sufficient if he be *bachelier-ès-lettres*.

2. In these *pensions*, they are not allowed to extend their instruction beyond the inferior classes, those of grammar, the elements of arithmetic, and geometry. Consequently there are no *pensions de plein exercice* ; and a student can only commence his classical studies in a *pension* : he must finish them elsewhere. In all other respects the regulations which apply to institutions apply also to *pensions*.

The number of institutions and *pensions* in France is about 1300 ; and the number of youths who receive the secondary instruction in the various kinds of establishments described above, is more than

50,000. Among the youths to whom their parents wish to give a liberal education, there is a considerable number who are designed for commerce, or other pursuits not professional. For them the study of the ancient languages is of less use than an acquaintance with such branches of knowledge as may be useful in their future occupations. This class of pupils requires a separate kind of education. The University, such as it was transmitted by the empire to the government of 1814, so far from establishing this kind of education, opposed the introduction of such a system into private schools. The general and absolute obligation to send the youths to attend the college classes did not permit the schools to form special courses of study adapted to prepare youth for commerce and other branches of business. In 1829 an attempt was made to remedy this inconvenience, which was effected in two ways: first, by establishing in several royal and communal colleges separate courses of study for those youths designed for commerce, &c.; and secondly, by authorizing the principals of institutions, and masters of boarding-schools, to form similar classes, the pupils of which are excused from attendance on the college classes. In this way the care of the government and individual enterprise have united in supplying a species of instruction which is indispensable.

It remains to say something about the secondary instruction in the ecclesiastical schools; for if we were to omit giving a summary view of this department, the reader would have but a very imperfect idea of the condition of the secondary instruction in France, and he would be unable to comprehend the serious difficulties and the important political discussions which these ecclesiastical schools have given rise to. When the Catholic worship was re-established in France, a seminary for theological studies was founded in each diocese. It was the intention of the government that youths designed for the church should prosecute their classical studies in the ordinary schools, and, on the completion of them, be admitted into the seminaries. A few years afterwards the bishops expressed a wish to have some private schools, in which youths designed for the priesthood might receive their classical education. These schools were established under the name of ecclesiastical secondary schools, or little seminaries, in contradistinction to the great seminaries, or theological schools. This *ordonnance* contained various clauses, the object of which was to prevent youths, not intended for the priesthood, from being admitted into the bishops' new schools. But the clergy, whose darling object it was to get into their own hands the education of the French youth, evaded the regulations of the ordonnance in every possible way. In a short time lay students were admitted into the little seminaries, and sometimes they were even more numerous than the ecclesiastical students. The clergy went so far as to establish, under the name of little seminaries, eight Jesuit colleges, which had scarcely any other than lay pupils. The ordinary schools pay a tax under the name of the university contribution; this tax is one-twentieth of the sum that each pupil pays to the pension; but the ecclesiastical schools

had been exempted, because it was supposed they would only admit ecclesiastical students. This privilege, as we have seen, they abused by receiving lay pupils, who would consequently enjoy exemption from the university-tax by an evasion of the law. The ordinary schools could not have maintained the competition; and instead of the university monopoly, there would have been a clerical monopoly, the tendency of which, we may conjecture, would not have been quite in conformity with the spirit of the charter. The government remedied these serious evils by the celebrated ordonnances of June 16th, 1828, which forbade individuals belonging to religious societies, not sanctioned in France, to keep schools; and also introduced fresh regulations to prevent the little seminaries from receiving lay pupils. The number of pupils in these establishments was limited to 20,000.

Hence it appears that 70,000 youths in France receive the secondary or classical instruction—50,000 being lay, and 20,000 ecclesiastic students.

Such is an exact statement of the present condition of the secondary instruction; but important modifications will follow from the new charter, and among them we may expect to see established, liberty of instruction. This important principle will be recognised as a part of public education, and will contribute to its improvement. As to the legislative enactments that will be made on this subject, we can only form conjectures; but some such as the following would be desirable. Those who form private schools might be required to give proof of their capability, without being otherwise restricted in the establishment of such schools. According to this plan, a person might become principal of an institution, master of a pension, director of a private college, just as a man becomes an advocate or physician; all he would have to do would be to give proof of his qualifications. Private schools should not be required to send their pupils to attend college classes; if they were exempted from this regulation, the masters would be enabled to arrange their studies in the way which they might think best, choosing the most expeditious methods, and adapting the education to the pupils' different destinations in life. Thus instruction might be rescued from the college routine and antiquated modes; and it would, like other arts, improve by being freed from restrictions. The government and communes would still have their schools, but a wholesome emulation would be excited between them and private schools founded by individual enterprise. Private schools should not be exempted from inspection. Authorized agents should have the privilege of visiting them, whenever they might deem it necessary, not for the purpose of fettering the master in his plans and methods of instruction, but to ascertain that the morals, discipline, and health of the pupils are not neglected.

We come now to speak of the *superior* instruction, which in France is given in schools called faculties. There are five kinds of faculties; theology, law, medicine, sciences, and letters. The principal object of studies in the faculties, is the obtaining of degrees.

In each faculty there are three degrees, those of bachelor, licentiate, and doctor. These degrees are obtained in succession, after examinations and *public acts or theses*. As we have already remarked, a student cannot obtain a degree in theology, law, or science, without being a bachelor in letters.

There are in France six faculties of Catholic theology; at Paris, Lyon, Aix, Bordeaux, Rouen, and Toulouse. At Aix, Bordeaux, and Rouen, they teach dogmatic theology (*le dogme*), morality of the gospel (*la morale évangélique*), history, and ecclesiastical discipline. At Lyons and Toulouse there is also a chair of Hebrew. The faculty of Paris has two chairs more than those of Lyon and Toulouse; one of sacred literature, and another of pulpit eloquence. The faculties of Catholic theology have very few students, and it is very unusual for a person to take degrees in them. The canons received in France had made degrees necessary for the higher ecclesiastical functions; but these canons, the utility of which was so apparent, though not abrogated, have fallen into disuse. For example, a person cannot be made a bishop without being a licentiate in theology, yet scarcely a single prelate who has been chosen for several years past has obtained this degree. The Court of Rome, however, it appears, considers the ancient rule as existing in principle, as the bulls which it gives to ecclesiastics named to a bishopric by the king, generally contain a dispensation from the degree of licentiate. The Catholic clergy of France appear to dread publicity in their instruction and examinations. This disposition may be attributed to that ultramontane tendency, in accordance with which they choose rather to conceal their theological instruction within the walls of their seminaries than to lay it open to the public. This much is certain, that whenever the government has wished to supply vacancies in the chairs of the theological faculties by the method of *concours*, this wish has been opposed by the bishops in every possible way. Perhaps the clergy would be glad to see these faculties suppressed, but it is rather the duty of the government to maintain them, and to render their instruction real and effectual. To accomplish this, it would be necessary to put in force the laws that required degrees as a qualification for the higher ecclesiastical functions, which would be one of the surest ways of opposing *ultramontanism*, since publicity is the natural foe to all that is false and dangerous. If this salutary measure were adopted, the clergy would soon see that it is their interest and duty to recur to the real principles of the Gallican Church, by which means they would quickly recover that confidence of the people which it is so desirable that they should possess\*.

There are two faculties of Protestant theology; one at Strasbourg, for the confession of Augsbourg; the other at Montauban, for the Helvetic confession. In these faculties they teach dogmatics, the gospel morality, Hebrew, ecclesiastical history, sacred eloquence, philosophy, and *exegesis*. The courses are well attended.

\* The wish that is here expressed has been effected by a recent ordonnance.

The faculties of law are nine in number; at Paris, Aix, Caen, Dijon, Grenoble, Poitiers, Rouen, Strasbourg, and Toulouse. In all these schools they teach the institutes of Justinian, the civil code, and method of judicial proceedings. There are in some schools also a chair of the commercial code, of *droit administratif*, and of the Pandects. At Paris all these chairs exist; and there are, besides, chairs of the history of law and of national law. These two chairs, and that of *droit administratif*, were established in 1819; but, three years afterwards, a jealous power, which dreaded every thing however remotely connected with politics, declared them to be suppressed. In 1828-29 they were re-established. To obtain the degree of bachelor a person must attend a faculty of law for two years; in one year more the degree of licentiate is obtained; and in another year that of doctor. The students enter for three-month courses, and their attendance is ascertained by calling over the names. If they have not attended the proper number of courses, and if they cannot produce certificates of diligence, they are not admitted to the examinations and theses. The degree of licentiate is indispensable to enable a person to practise as an advocate or to fill a judicial situation. The degree of doctor is only required for those who intend to be professors, and, consequently, most students are satisfied with the degree of licentiate.

In France there are two classes of persons who practise the healing art; doctors either in medicine or surgery, and *officiers de santé*. To be admitted doctor in medicine or surgery, a person must have studied four years in a faculty of medicine, and must have undergone five examinations, and written one thesis. The first examination is on anatomy and physiology; the second on pathology and nosology; the third on *materia medica*, chemistry, and pharmacy; the fourth on *hygiène* and medical jurisprudence; the fifth on medical *clinique*, for those who are candidates for the degree of doctor in medicine, and on surgical *clinique* for those who are candidates for the degree of doctor in surgery. Thus the four first examinations are common to medicine and surgery; it is only the fifth which is varied according as the candidate is intending to practise surgery or medicine. The time of study is determined, as in the faculties of law, by three-month courses. There are three faculties of medicine in France; at Paris, Montpellier, and Strasbourg. The faculty of Paris has chairs of anatomy and physiology, medical chemistry, *physique médicale*, medical natural history, pharmacy, *hygiène*, surgical pathology, medical pathology, operations and bandages, therapeutics and *materia medica*, medical jurisprudence, midwifery, diseases incident to parturition and to newly-born children, medical *clinique*, surgical *clinique*, obstetric *clinique*. The two other faculties have the greater number of the chairs here enumerated, but some are wanting. For example, at Montpellier there are no chairs of *physique médicale* nor of medical natural history.

To become *officier de santé* it is not necessary to have studied in a faculty; it is sufficient qualification to have been examined by a

medical jury. There are medical juries in the principal town of every department, which assemble at a fixed time of the year. The juries are composed of two doctors established in the department, and a commissioner chosen from the professors of the faculties of medicine. The qualifications required from candidates for examination are—to have been a doctor's pupil for six years, or to have attended hospital practice during five successive years, or to have studied for three years either in a faculty of medicine or in a secondary school of medicine. The secondary schools of medicine are eighteen, established in the principal towns; Amiens, Angers, Arras, Besançon, Bordeaux, Caen, Clermont, Dijon, Grenoble, Lyon, Marseilles, Nancy, Nantes, Poitiers, Rheims, Rouen, and Toulouse. The *officiers de santé* can only practise in the department in which they have been examined; and they cannot perform difficult surgical operations in places where there is a doctor, except under his superintendence and inspection. The incompetence of a great number of *officiers de santé*, and the great facility with which this title is obtained, have long been the subject of complaints, which it is to be hoped the legislature will remove by new regulations. A few years ago a draft of a law affecting the secondary schools of medicine was presented to the Chambers, but it was not adopted. It is of urgent necessity that the abuses of this system should be remedied.

There are schools of *pharmacy* at Paris, Strasbourg, and Montpellier.

The faculties of sciences are seven; at Paris, Caen, Dijon, Grenoble, Montpellier, Strasbourg, and Toulouse. In all these schools there are chairs of mathematics, natural history, physics, and chemistry. Toulouse has also a chair of the application of mathematics; and Montpellier has chairs of astronomy, mineralogy, and zoology. At Paris the number of chairs is much greater. There are professors of the differential and integral calculus, of the higher parts of algebra, descriptive geometry, physical astronomy, mechanics, physics, chemistry, mineralogy, botany, vegetable physiology, and zoology. The faculty of sciences of Paris can reckon among its illustrious names such men as Thénard, Biot, Poisson, Gay-Lussac, and other European names.

There are in France six faculties of letters; at Paris, Besançon, Caen, Dijon, Strasbourg, and Toulouse. The two last-mentioned faculties have chairs of history, Latin literature, Greek, French literature, and philosophy. Besançon and Caen have one or two chairs fewer. The faculty of Paris has eleven chairs; Greek literature, Latin eloquence, Latin poetry, French eloquence, literary history and French poetry, philosophy, history of ancient philosophy, history of modern philosophy, ancient history, modern history, and geography. Of this celebrated school Villemain, Cousin, and Guizot, are the greatest ornaments. A general wish has been expressed to see established in the faculties of letters, and especially in that of Paris, chairs of foreign literature; for in proportion as the communication among nations increases, we feel more strongly

the wish to compare with our own literature, the poetry and eloquence which mark the character of other nations. A recent ordonance has formed such a chair in the capital.

The only degree conferred by the faculties of sciences and letters which requires as a qualification a certificate that the preliminary studies have been gone through, is that of *bachelier-ès-lettres*. The candidate for this degree must prove that he has gone through a course of philosophy in a college or other establishment *de plein exercice*. Youths brought up at home are the only persons who are exempted from this regulation. The examination for the *bacca-lauréat-ès-lettres* is, in general, not very strict; but that for the other degrees of the faculty of letters, and for those in the faculty of sciences, are much more so. These latter degrees, however, are of no use except to those who wish to become professors. It may be asked what effect will be produced on the superior education by the principle of liberty of instruction? Most probably the law will maintain the various faculties, and the present regulations with respect to the requiring of degrees, as a qualification for following various professions, while those who at present have the title of professors will have the superintendence of the examinations and the theses. But we may expect that in France, as in most of the German universities, every person who has obtained the degree of doctor will be allowed to open a public class, and that the students will have the privilege of choosing between the courses of such teachers and those who have the title of professors; and, further, that the diligent attendance of the pupils on such classes will be taken into account as necessary to prove the fact of their having studied the length of time prescribed by law. And, lastly, we may expect that all professorships will only be conferred by the method of the *concours*; and as this will take place between candidates accustomed to teach publicly, they will certainly be more brilliant than they are at present.

We must add to the schools of superior instruction, the College of France, the Museum of Natural History of the Jardin du Roi, the School of Living Oriental Languages in the Royal Library, and the Special School of the Fine Arts.

The Polytechnique and Normal Schools are also institutions for superior instruction: the first mentioned is well known through Europe; the second is designed to form professors for the royal and communal colleges. It was established in 1812, and soon produced striking effects by sending forth a number of excellent professors; it served as a kind of nursery for the colleges, which, under its influence, were constantly improving. In 1821 the Normal School was suddenly suppressed, under the pretext of what was called the disaffection (*mauvais esprit*) of the pupils. This *mauvais esprit*, we may readily conjecture, was nothing else but the love of those institutions sanctioned by the charter. How is it possible to study with ardour history and philosophy, to store the mind with the finest productions of ancient and modern literature, and to ascend to the principles of the beautiful in every object of inquiry, without

loving liberty? It was an unavoidable crime, that on which they grounded the sentence pronounced against the Normal School. The *theoretical* party urged the destruction of this institution with all their power, considering that the readiest means of destroying all public instruction, with the view of benefiting the ecclesiastical establishments, was by overthrowing the colleges; and the surest way of effecting this, was to ruin that institution which was designed to secure a regular supply of professors. A few years after an establishment of the same nature as the Normal School was established under the title of Preparatory School, but it was formed on a much reduced scale, and its regulations framed under the influence of the most absurd fears. The Ministry of 1828 designed to re-establish the Normal School under its former name, and with the old organization; but this failed to be accomplished, and the proscription of the school still continued in force. Since the events of July, 1830, the Preparatory School has taken the name of Normal School,—a circumstance which makes our hopes revive. We cannot doubt that this school will be extended and enlarged consistently with the importance of its object, and a legal enactment to this effect is eagerly looked for. At present the pupils are received after competition and examination. The school has two divisions, one of science and one of letters: the total number of pupils is fifty. After three years of study they are placed as *regents*, that is, as professors, in the communal colleges. After this period of studies they are also admitted to the *concours de l'agrégation*. The object of this *concours* is to furnish professors for the royal colleges, and the private colleges of St. Barbe and St. Stanislaus. The pupils of the Normal School, the regents of the colleges, and the masters of studies (*maîtres d'études*) in the royal colleges, are admitted to the *concours de l'agrégation*. It is determined beforehand how many titles of *agrégé* shall be conferred after the contest. The candidates who distinguish themselves most in the different examinations of the *concours* receive the titles. They are then placed in the royal colleges as soon as there are vacant chairs. Much has been written and said against this system of making *agrégés*, but experience appears to be in its favour. It has generally produced good professors. But this is not its only advantage: it maintains among the pupils of the Normal School, the regents of the communal colleges, and the masters of studies in the royal colleges, an emulation, without which one might fear that their zeal would slacken and their efforts be relaxed. The system of *agrégation* tends to raise the character of the general body of teachers.

Besides these schools of which we have been speaking, there are in France various special schools, of which we ought to give some short account. These are:—

1. The *écoles des arts et métiers*, at Châlons and Angers. The special object of these establishments is to educate persons who shall combine with a practical knowledge of the mechanical arts all the theoretical instruction necessary to enable them to perform their mechanical occupations in a skilful manner. The pupils are

appointed by the Minister of the Interior, and are 600 in number; 400 at Châlons, and 200 at Angers; 450 of these pupils are maintained entirely or in part by the State. Three appointments are assigned to each department, one at half allowance, a second at three quarters of a full allowance, and a third with a complete allowance. Eight appointments are given to the Society for the Encouragement of National Industry; six with full allowances, and two with three quarters of a full allowance. The nominations to these appointments assigned to each department are made on the recommendation or presentation (*présentation*) of the préfet. There are, besides, boarders (*pensionnaires*), who pay 500 francs per annum. The theoretical instruction comprises writing, arithmetic, French grammar, the elements of geometry and trigonometry, descriptive geometry with its application to the planning of carpenter's work and machinery, the principal facts of the physico-chemical sciences applied to the various branches of industry, and the exhibition of experiments on the strength and resistance of different materials used in buildings. The manual labours are limited to the occupations of the wheelwright, carpenter, joiner, smith, *limeur et ajusteur*, turner of wood, turner of metals, moulder, iron and copper founders.

The course of study ordinarily comprises four years; but the pupils who particularly distinguish themselves may obtain permission to remain a year longer to complete their education. At the end of the fifth year the most skilful of these pupils may be sent into the principal manufactories of the kingdom, and stay there a year at the expense of the State. The number of those to whom this advantage is granted cannot exceed ten.

2. The *Conservatoire des Arts et Métiers* at Paris. In this establishment there are public courses of mechanics and chemistry applied to the various branches of industry, of physics, industrial economy (*économie industrielle*), of descriptive geometry, and drawing. Those who have resided at Paris know that the *Conservatoire* contains a valuable collection of models of machinery of all kinds. A council *de perfectionnement*, attached to the *Conservatoire*, and composed of scientific men and manufacturers, give their opinion on everything which they consider to affect the preservation or the improvement of the *Conservatoire* and the school of arts and trades.

3. The Free School for Mathematics, and for Drawing applicable to the mechanical arts, established at Paris, in the street of the School of Medicine. In this school are taught practical geometry, arithmetic, mensuration, and land-surveying; the cutting of stone and wood; the elements of architecture; the drawing of the human figure, animals, and flowers. There is also a free school of drawing for young persons. A great number of towns in the departments possess similar establishments.

4. The Special School of the Fine Arts, established at Paris, in the street *des petits Augustins*. This school is divided into two sections, one comprehending painting and sculpture, the other archi-

tecture. Distinguished artists, whose talents confer honour on France, are professors in this school. Besides this, the state supports schools of painting at Lyon and Dijon; others are supported by the towns. From among the latter class we may mention that of Valenciennes, which has produced very distinguished pupils, of whom three have gained the first great prize at Rome.

**— 5. The French School of the Fine Arts at Rome.**

**— 6. The Royal School of Singing and Declamation, in the street of the *Faubourg Poissonnière*, at Paris.**

**7. The Veterinary Schools of Alfort, Lyon, and Toulouse.** Up to 1825, there was at Alfort a chair of rural economy, which we may hope to see re-established. The training and breeding of the horse are taught in these three schools, having formerly been taught in the *manège* of Strasbourg.

**8. The schools designed to form proper persons for other public employments, such as the military school of St. Cyr; the school of cavalry of Saumur; the school for forming staff-officers; the school of *ingénieurs géographes*; the school of artillery and of military engineering at Metz; the school of bridges and roads; the school of mining; the school of forests (*école forestière*) at Nancy; the school for naval engineering at Brest. To be admitted into the school of geographical engineers, of engineering and artillery, of roads and bridges, of naval engineering and mining, it is necessary to have been a pupil of the Polytechnic school. There are, however, in the school of mines, besides the engineer pupils, other pupils (*élèves externes*) who receive gratuitous instruction. The latter cannot form part of the corps of engineers of the mines, but the knowledge which they acquire enables them to direct the working of mines. Thus this school, while it supplies the public service, aids in cherishing private industry. There is also a practical school of mining at St. Etienne.**

Besides the school designed to form officers for the marines, there are schools of hydrography for the merchant marine in nearly all the ports of the kingdom.

There are in France two principal schools of agriculture; one at Roville, the other at the experimental farm of Grignon: in these schools the instruction is both theoretical and practical. The theoretical instruction consists of courses on agriculture, and the related sciences. The school of Roville, directed by M. Mathieu de Dom-basle, is a private undertaking, which has formed skilful pupils, and contributes essentially towards diffusing in France good modes of cultivation, which in this country are not yet sufficiently known and followed. These schools of agriculture are not the only ones in France. We may add to them (1.) The preparatory school of agriculture, founded at Paris by M. Blancq, formerly pupil of the Polytechnic school. The name of the professor appears a sufficient guarantee for its success. (2.) Three pattern farms; one at Verneuil (Maine and Loire), the other at Grandjouan near Nantes, the third near Toulouse. (4.) Another experimental farm in the department of Aix, directed by the agricultural society of this depart-

ment. (5.) Schools of horticulture. We must comprise in this list, the course on cultivation, established by Thouin, at the Museum of Natural History at Paris; the courses on botany applied, and on the general cultivation in botanical gardens, on pharmacy, on agriculture, &c. Such courses are given also in a considerable number of towns; for example, at Strasbourg, Lyon, Dijon, Montpellier, Toulouse, Brest, Lorient, Rochefort, Marseilles, Toulon. Lastly, the horticultural institution, established by M. Soulange Bodin, on his beautiful domain of Fromont, is an excellent school, that merits particular notice.

There are at Paris several commercial schools, undertaken by private individuals. Among others, we may mention the *Lycée Commercial et Industriel*, situated in the Passage Saulnier. This establishment is well managed, the course of studies is good, the number of pupils progressively increases, and it deserves our best wishes for its further prosperity.

Lastly, there is an institution which seems designed to render the greatest service to industry—we mean the Central School of Arts and Manufactures of Paris (*école centrale des arts et manufactures*), in the street Thorigny: this school is intended to form civil engineers, superintendents of machinery used in manufactures (*directeurs d'usines*), heads of manufacturing establishments, and professors of the application of the sciences. The school has been founded by some distinguished men of science, who possess also practical knowledge. It would require a very minute detail to explain the whole organization of this school, and the instruction given in it \*. We may, however, state, that this school has no boarders; that pupils are only admitted after an examination in which they must prove their acquaintance with arithmetic and the elements of algebra and geometry. The course comprehends three years. In the first, the pupils learn descriptive geometry, mechanics, general physics, and general chemistry; in the second, descriptive geometry applied, the construction of machines, the physical theory of steam-engines, physics and chemistry applied to practical objects (*physique et chimie industrielle*), civil and commercial architecture, natural history, the anatomy and physiology of man, mineralogy, geology; in the third, the construction of machines and their *specification*, chemistry applied to *practice or commerce*, architecture and public works, the working of mines, natural history applied to practical purposes, the statistics of the industrious classes, and the state of health of such classes (*statistique industrielle et hygiène industrielle*). The expense for each pupil is about six hundred francs per annum. This private establishment, formed on a vast scale, is in the highest degree worthy of attention and encouragement.

Such are the means which France presents for public education; and considerable as they are, we believe that, if better managed and better combined, they would produce still greater results. The first thing that is wanting, is a law, by which all the schools maintained by the state (except perhaps those purely military) might be placed

\* See *Journal of Education*, vol. i. p. 399.

under the direction of a single minister ; and this, we believe, would produce more unity and harmony in this department of the public administration. The majority of these schools are now under the care of the minister of public instruction, while some are under the minister of the interior. This separation is injurious, and founded on no sufficient reason. There is no reason why a single department of the administration should not comprise everything that relates to public education, to the academies, the arts, and, in a word, all the *moral power* of society.

**SECOND QUESTION.**—*What is the general character of the education in France in the schools and colleges ? and what is the relationship between the colleges and the universities ?*

The first part of this question has been already answered. In the answer to the third and sixth questions further particulars are given. The second part of this question is answered under the head of the fourth question.

**THIRD QUESTION.**—*What measures have been taken for the education of the peasantry, and mechanics or artisans ?*

Very little that is satisfactory can be said on this head. The education here referred to is that called the *primary* or *elementary* (see the answer to Question I.), for which the government has hitherto done very little ; almost everything still remains to be done. It may be asserted that the primary instruction will never be effective till the following regulations are in force :—(1.) There should be formed a sufficient number of schools to educate masters in. (2.) The primary instruction should be gratuitous for all indigent families. (3.) Instructors, when old or infirm, should have some allowance secured. (4.) There should be examinations for the purpose of ascertaining the qualifications of masters, and some kind of inspection as a check on their conduct ; but care should also be taken that such examination and inspection should not become vexatious and injurious. (5.) The best methods of instruction should be encouraged. (6.) To the knowledge of reading, writing, and arithmetic, should be added instruction in those branches which are necessary to form intelligent and skilful workmen. (7.) The government should cause books to be written and circulated which are adapted to the comprehension of the pupils in the primary schools ; such books as would tend to form the reasoning powers, to impress on their minds religious principles free from all fanaticism and superstition, to inspire them with sentiments of honour, humanity, patriotism, and submission to the laws, to give them useful ideas suitable to their condition in social life, and, in fine, to remove those dangerous prejudices under which the lower classes still labour. We shall now show how far this has hitherto been accomplished.

The schools designed for forming masters, under the title of primary normal schools, are very few in number : some were established by the administration of 1828. The government had but very

limited funds at its disposal to meet the expenses of these schools ; and accordingly the minister of public instruction applied to the councils-general of the departments to assist him. Only four or five of these councils answered his application ; the rest refusing, in terms which clearly showed how little interest they took in the progress of primary instruction. It is well known what kind of men these councils consisted of at that period, and to what an extent the influence of the *theocratic* party and the absolutists prevailed. The few primary normal schools which have been established have produced the happiest results, having already sent out excellent masters. The present government is zealously engaged in extending this useful branch of education.

The law of September 14, 1791, enacted that there should be organized a system of public instruction for all the people, which should be gratuitous with respect to those kinds of knowledge which are indispensable for all classes. Unfortunately, this law has never been carried into effect. The law of 11th Floréal, the year 10, determined that the primary schools should be established by the communes ; and it also determined, that the payment to the teachers should consist (1.) of lodgings furnished by the communes ; (2.) of fees paid by the parents, the amount to be fixed by the municipal councils. The municipal councils were to have the power of exempting from payment those who were unable to pay, provided the number of pupils exempted should not exceed one-fifth of the children received into the primary schools. We may observe how confined and illiberal this system was, compared with that which the law of 1791 had contemplated. The ordonnance of April, 1816, had for its object the re-establishment of the system laid down by the law of 1791 : it declared, that 'every commune should be bound to provide primary instruction for all the children of the commune, giving this instruction gratuitously to indigent children.' But the means of carrying this into effect have always been wanting, the majority of the communes being unable to provide a salary for a primary instructor. It would seem indispensable, then, that the state, or the departments, should form a common fund to supply the salaries, or some part of the salaries, of the teachers in the poorest communes. A law on this subject is of urgent necessity.

When all the masters are suitably paid, it will be easy to form a pension fund for those who become old and infirm, by making a certain deduction from their salaries. Various attempts have been made to form a fund of this kind ; but a solid basis has been wanting to build it upon, since most teachers have no fixed and determinate salary.

Persons who wish to become primary instructors must fulfil two conditions. In the first place, they must obtain from the rector of the academy a certificate of competency (*brevet de capacité*). This certificate only determines the fact of competency, without conferring on them the power to teach in any determinate place. There are three degrees of certificates of competency : those of the inferior degree are given to persons who can read, write, and cipher ; those of the second,

to teachers who can write a good hand, and are acquainted with orthography and arithmetic; the certificates of the first degree are given to teachers who are acquainted with the principles of French grammar and arithmetic, and are competent to give some instruction in geography, land-surveying, and other branches of knowledge useful in primary instruction. This gradation of certificates tends to introduce emulation into the profession of primary instructors. Every teacher, both of the lowest and second degree, strives to acquire the knowledge which is necessary to raise him to a higher rank than that which he occupies: experience has proved this. The rector, before giving the certificate of competency, either examines the candidate himself, or by a deputy. It is to be wished that there was at least one deputy of this kind in each arrondissement, to save candidates a long and expensive journey. The ordonnance of April 21, 1828, requires from Catholic candidates a certificate of their religious instruction, signed by a delegate of the bishop of the diocese. This regulation should be speedily abolished, because it makes the primary instruction depend on the clergy, who are far from being desirous to see it extended.

As we have already remarked, the person who obtains a certificate of competency, does not obtain by that alone the privilege of acting as a primary teacher; he must, in addition to that, obtain permission to teach in a determinate place. This permission is granted by the rector of the academy, on the recommendation of the committee that has the superintendence over primary instruction in the district in which the teacher wishes to establish himself. There is a committee in each canton, composed of the mayor, magistrate (*juge de paix*), and the *curé* of the chief place in the canton (all these being ex officio members), and also of a certain number of the chief inhabitants chosen by the rector. In the chief towns of the arrondissement, the sub-prefect and the *procureur du roi* may attend the committees. The mayor presides, except when the sub-prefect or the *procureur du roi* attends, in which case the sub-prefect presides, or in his absence the *procureur du roi*. The committees of the cantons are not only charged with the duty of giving their opinion on the claims of the candidates, but it is also one of their most important functions to superintend and encourage the primary instruction. If there is any complaint against a primary instructor, the committee of the canton summon the teacher, examine him, make inquiry, and give their opinion, which is transmitted to the rector of the academy. The rector can deprive the teacher of the power of teaching, leaving him, however, an appeal to the minister of public instruction. If there is reason for depriving the teacher of his certificate of qualification also, the matter is submitted to the academic council, still leaving the teacher an appeal to the council of the university. (The terms rector, academic council, and council of the university, are explained in the answer to Question 4).

Such is the present condition of legislation with respect to the profession of a primary teacher, but the principle of freedom of

instruction must necessarily make some modifications in the system. The possession of a certificate of competency ought to be the only qualification required from a primary teacher. Instructors are divided into two classes; the communal teachers, who are maintained entirely or in part by the communes, and the free teachers, who receive nothing from the commune, and who are supported entirely by their teaching. The municipal councils ought to be empowered to choose communal teachers from among those individuals who have the certificate of competency; and every person who has this certificate ought to be allowed to settle himself wherever he pleases, as a free teacher, on condition simply of declaring himself at the mayor's office, and producing certificates of good character. Under such a system as this the committees of cantons would be useful. Their functions would consist, (1.) in superintending and encouraging primary instruction: (2.) in directing proceedings against masters when necessary, and giving their opinion in such cases. When the misconduct required it, the instructor, whether communal or free, might be deprived of his commission; the communal teacher might also be removed from the commune (still keeping his commission) on the requisition of the municipal council, when the reasons assigned by this council might appear to warrant such a measure. The academic council would pronounce sentence in the first case, and the rector in the second. It would be desirable to combine, if possible, the mode of forming the committees with the law on the municipal organization.

In France three methods of primary instruction are known; individual instruction, simultaneous instruction (*l'enseignement simultané*), practised by many teachers, and among others, the brothers of the Christian schools (*les frères des écoles chrétiennes*); and mutual instruction, on the Lancasterian method.

The first of these methods is essentially bad; the second is adapted for those rural communes that have a thin population. In all places populous enough to furnish a school of forty or fifty pupils, the method of mutual instruction is preferable to all others, because it is cheaper and more expeditious, and consequently can be extended to all classes of society. A school of the brothers of the Christian schools costs annually 1800 francs: a school of mutual instruction costs scarcely half this sum; and yet more pupils can be taught in the latter than in the former, the master being multiplied as it were by the aid of monitors. The mutual instruction was proscribed at the period when the *theocratic* party prevailed. An ordonnance of April 8th, 1824, had granted to the bishops the power of granting or revoking the commissions of the primary teachers. This *régime* continued till the *ordonnance* of April 21st, 1828, and during this period three-fourths of the schools of mutual instruction were closed. Since 1828 they have recovered, but slowly: great obstacles have arisen from the party spirit that prevailed among the local authorities; but at present we may hope that they will receive fresh encouragement both from the government and the municipal authorities.

It is important also, that in the less populous communes, individual instruction should give way to simultaneous instruction. The committees of the cantons might contribute materially towards producing this result. Experience has proved that periodical meetings of the teachers in the chief town of the canton, in presence of the committee, are well adapted to check bad customs, and cherish good ones. It is to be wished that this system, which has been in operation in some departments, should be generally introduced.

The schools in which, in addition to reading, writing, and arithmetic, instruction is given in those branches necessary to form skilful workmen, such as perspective drawing and geometry, are now tolerably numerous. The government and the communes grant them such encouragement as will doubtless increase their number.

There are also (as we have remarked in the answer to the first question), in most of the large towns, public courses of lectures on geometry and mechanics applied to the arts. Several towns have also courses of practical chemistry, which are attended by workmen of various professions and ages: the progress of those who attend, and the increasing skill of the artisan, are sufficient proofs that something effectual has resulted from these lectures.

The regiments of the army have schools of mutual instruction for the purpose of teaching the soldiers reading, writing, and arithmetic.

Good books are generally wanted in the primary schools of France. The insipidity and the absurdity of the greater part of those used are really disgusting. But for some time past great progress has been made in writing books adapted to the comprehension and condition of the children who frequent primary schools. These books consist of small elementary treatises on the different useful arts, and of short stories, which present good moral lessons in an ingenious and interesting form. Among works of this latter description, we may mention the delightful little books of M. Laurent de Jussieu, which however are not yet very extensively used in schools. The government appropriates some money for the purpose, and in 1828 proposed as a subject for a prize of 10,000 francs, the composition of a text book, adapted to the use of those who can read fluently. This proposal attracted much public attention, but it is not known what has been the result of it.

The sums annually granted to the minister of public instruction are far too small, though for some years they have been progressively increased. Three years ago they amounted only to 50,000 francs, but since that time they have been raised to 300,000. This sum is still manifestly too little; it would require several millions to accomplish what is desirable. No expenditure, both *morally* and *materially*, is so essential as this, in a country both free and industrious; and as the government no longer depends on force, fear, and prejudices, but on the general good sense and public feeling, it is indispensable that instruction should extend to all classes of society.

We shall take this opportunity of rendering just praise to several philanthropic societies that have actively encouraged primary instruction during the last fifteen years. We have seen them some-

times by their diligence making amends for the negligence of the government, sometimes struggling against its pernicious agency, and sometimes seconding the laudable intentions that the government has occasionally displayed. The society for elementary instruction established at Paris is that which has done most. Without its energetic perseverance and its generous aid, mutual instruction would have sunk under the persecution which for many years has been directed against it. Associations of the same nature were formed in a great number of other towns, which supported the schools of mutual instruction by raising private subscriptions. The society of Paris has constantly corresponded with these associations, and aided and encouraged them. We should not forget that the efforts of this society have at every period been seconded by a functionary, whose justice, independence, and intelligence, have left an honourable record in the capital. M. Comte de Chabrol has always been the zealous protector of primary instruction, and the indefatigable propagator of the Lancasterian method. His honourable conduct merited the higher praise, from the contrast which it exhibited to that of nearly all his colleagues. Political changes should not prevent us from paying to an honest man this tribute of justice and gratitude, which in his retirement perhaps he may hardly expect to receive.

**FOURTH QUESTION.—***What is the general system of government in the colleges? The nature of the university superintendence? The mode of paying, controlling, and removing professors?*

This question contains several heads which must be answered separately.

**I. The general management of colleges.**

In this we must distinguish between royal and communal colleges. Every royal college has a head called *proviseur*; and also a *censeur des études*, whose business is to superintend, under the *proviseur*, the conduct, the morals, studies, and progress of the pupils. A responsible clerk (*agent*), called the *économie*, manages the receipts and expenditures. An officer entitled *aumônier* has the charge of the religious instruction. All the royal colleges admit both boarders and day scholars, except two, the college of Charlemagne, and the college Bourbon at Paris, which only receive day scholars.

The boarders are divided into *libres* and *boursiers*; the former class comprising those whose expenses are paid by their own family; the latter, those whose expenses are paid entirely, or in part, either by the state or the communes. The day scholars are those youths who either live with their parents, or are boarded in institutions or *pensions*, and attend the college classes. They pay to the college certain sums, known under the name of *rétribution collégiale*, which must not be confounded with the *rétribution universitaire*, described in the answer to the first question.

The college receipts consist (1.) of sums granted by the state to pay the fixed salaries of the *proviseur*, *censeur*, *aumônier*, the *économie*, and the professors: (2.) of the sums paid by the boarders, whether they be *libres*, or supported by the state or the communes:

(3.) of the *réturbation collégiale* paid by the day scholars: (4.) of income from funded property, and other property belonging to the colleges.

The expenses consist (1.) of the fixed salaries paid to the above mentioned functionaries: (2.) of the variable payment (*traitemen<sup>t</sup> éventuel*), and the supplemental allowance made to a functionary. The *traitemen<sup>t</sup> éventuel* arises from a certain share in the money paid for board, and a certain share in the sum paid by day scholars. The supplemental allowance comes out of the *boni* of the college, a term by which is meant the excess of receipts above expenditures. If there are no *boni*, the supplemental allowance is furnished by the general funds of the university: (3.) the salary for the *maîtres d'études*: (4.) the maintenance of the pupils: (5.) the fixed salary of some professors who receive none from the state; for example, professors of history in most of the departmental colleges, professors of natural history, and of modern languages: (6.) of small expenses of various kinds, such as for the purchase and repair of philosophical instruments, books, &c. &c.; small repairs of the building, &c. The establishments are furnished, and the great repairs are paid by the towns in which the royal colleges are situated.

The *boni* of the colleges, deducting the sum charged on them as above described, are employed in making purchases in the funds. Several of these establishments have funded property to a considerable amount. The colleges can receive donations and legacies, sell, purchase, &c., with the authority of the government. Their financial concerns are distinct from, and independent of, those of the university, and also those of the public treasury.

The communal colleges are maintained by the communes. The financial management is not the same in all. In general, the boarding department is the sole concern of the principal of the college; and the town levies on each day boarder a sum which goes to pay part of the salary of those professors who, in the language of the university, are called regents. The remainder of the sum which is necessary for this purpose is paid out of the communal income. The town supplies the building and keeps it in repair.

## II. Superintendence of the university.

The *university*, in France, is the whole of the body of teachers. There are in the university two classes of functionaries; one consisting of teachers; the other of those who have the management and superintendence. The latter class comprehends the minister of public instruction, the councillors of the university, the inspectors-general, the rectors and the inspectors of the academies.

The minister of public instruction discharges all the duties which the constitution of the university has entrusted to the grand master of the university. In everything which is purely administrative he decides on his own responsibility, after having taken the opinion of the council of the university. He exercises also a disciplinarian power in cases of smaller importance: but he cannot dismiss or erase from the list the members of the university; that is, he cannot deprive them of their place. Such a punishment can only be in-

flicted by the council of the university, which then decides like a real tribunal.

As we have just seen, the council of the university discharges two kinds of functions : as to matters of administration, it is an advising body ; in affairs of discipline, it pronounces judgment. As a tribunal, it has cognizance also of matters which belong to university jurisdiction, always leaving an appeal to the council of state. The same appeal is also allowed in affairs of discipline, but only when the sentence is that of deprivation. This punishment is of a nature altogether peculiar : the member of the university who has incurred it, is not only excluded from the body of teachers, but likewise declared incapable of discharging any other public function. The sentences of the university which impose the punishment of deprivation, are read at the public audiences of the royal court. In general, everything which belongs to the jurisdiction and penal powers of the university is regulated at present in a manner not at all satisfactory. A law on this subject is indispensable.

Some think that the best measure would be to extend the institution of jury to cases of university discipline, the jurymen being chosen from among the members of the university.

The councillors of the university are named for life. It is an important question to decide, if the perpetuity of their functions is advantageous, or if it would not be better that they should be chosen at stated intervals from among the professors of the faculties. Every permanent body becomes a stationary one : a council which is changed at certain periods, is more likely to follow the progress of improvement and of public opinion.

It is the duty of the inspectors-general to make the circuit of the various academies. They visit the faculties, royal colleges, and some other university establishments. The office of inspectors-general has often been attacked on the ground of being useless ; but we are of a different opinion. It is by the reports of the inspectors-general that the central administration discovers a crowd of abuses, which otherwise would never have come to its knowledges.

The territory of France is divided into twenty-seven academic districts, which is also the number of royal courts. Every academy has a head called a rector, who is aided in his functions by inspectors of the academy. The inspectors are generally two in number for each academy ; at Strasbourg and Rennes there are three, and at Paris eight. The rectors and inspectors of the academy superintend establishments for education, both superior and secondary, comprehending in this list both institutions and pensions, that is, places of instruction kept by private persons. They visit these places, examine the pupils to ascertain their progress, and inquire into everything which concerns the discipline and morals. They make circuits also through the principal primary schools. Each academy has an academic council, consisting of the rector, inspectors, and a certain number of other members appointed by the minister of public instruction, and taken as well from the members of the university as from the principal persons of the country.

Their services are given gratuitously. The academic council deliberate on the principal questions of administration which arise within the limits of the academic jurisdiction; and they also prepare all necessary proceedings, in matters of discipline, against members of the university. Such cases, as we have already remarked, are decided by the council of the university. In fact, the academic council decides, in certain instances, on matters of discipline relating to students in the faculties; in other instances, they confine themselves to bringing such cases before the university council, by whom judgment is pronounced.

### III. Mode of paying, controlling, and removing professors.

The mode of paying professors in the royal colleges, and regents in the communal colleges, has been already described. The professors of the faculties receive from the university a fixed salary, and they have besides, a contingent sum (*traitemment éventuel*), which arises from the fees for examinations, and the pupils' theses. It appears from this, that there is a difference between the mode of paying the fixed salary of the professors of the royal colleges, and the fixed salary of the professors of the faculties. The former are paid out of the public treasury; the latter out of the special funds of the university. These special funds, which are also charged with the salaries of the ministerial officers of the university, consist of funded property belonging to the university, of the university-fee or tax (*retribution universitaire*), the sums paid by the pupils of the faculties, and some other branches of revenue of less importance; but this distinction between the funds of the university, and those furnished by the common treasury, can interest foreigners but very little. Perhaps it would be desirable that the *teaching body* should have a sufficient endowment or allowance to secure all parts of the system; but that its budget and necessary sums should be voted by the chambers. In this way might be united the advantages of independence and legislative control. Others think that the *teaching body* should have no endowment or grant; and that grants for particular purposes tend to introduce abuses into the financial system. The question is one of difficulty.

As to the control over the professors, it consists in the superintendence of the university, and in the proceedings which may be instituted against them. We have already remarked that no professor can be dismissed without a judgment. The professors of the royal colleges, and the regents of the communal colleges, may be removed, without their consent, from one college to another. An order of the minister (of instruction) is sufficient for this; but the minister cannot make such an order, without taking the opinion of three members of the university council. It is the common opinion that a professor of a faculty cannot, without his consent, and without a judgment pronounced, be removed to another place.

**FIFTH QUESTION.—What are the principal branches of knowledge taught in the colleges? Of what nature are the examinations, rewards, and punishments, of students?**

In the answer to the first question we have mentioned the principal branches of knowledge taught in the colleges ; but some more circumstantial details may be useful. To give a clearer idea of the whole, we will suppose that a boy of nine years of age enters a college, being able to read and write correctly, and having an acquaintance with the elements of French grammar ; and we will follow him through his course of study, considering that we are speaking of a youth of average capacity. Such a boy as we are speaking of, passes two years in the classes called elementary, in which he learns Latin grammar and geography. He is exercised in translating the easiest Latin authors, and in making themes. At the age of eleven, he enters what are called the grammar classes, which are the sixth, fifth, and fourth. The pupil passes through one each year. He continues to study Latin, begins Latin prosody, and makes Latin verses. He also begins the Greek grammar. In the fourth class he reads Xenophon ; in the fifth he begins to study history.

At fourteen the pupil passes into what are called the humanity classes, which are the third and second. In the third he reads Virgil, Cicero, Sallust, Homer, Plutarch, and other Latin and Greek authors, which present about the same degree of difficulty with those just mentioned. He continues to make translations, themes, and Latin verses : in some colleges Greek themes also are made. In the same class lessons in natural history are given. In the second he composes Latin exercises on a given subject, which is a step towards the compositions of the rhetoric class. He also reads Latin and Greek authors of greater difficulty than those which occupy the third class. The study of mathematics is commenced. Except these differences, the studies in the second are the same as in the third. In these two classes he continues to study history.

At the age of sixteen the student begins rhetoric ; he writes original essays in Latin and French, makes Latin translations, Latin verses, and Greek translations. In this class the student reads Sophocles, Demosthenes, and the most difficult Latin authors. He terminates his historical studies, and continues the mathematics. The student has the choice of either staying one year in the rhetoric class, or going over the studies of this class a second time, which is called doubling.

From the rhetoric class the pupil passes to that of philosophy. The study of philosophy comprehends logic, metaphysics, and morals. The professor explains to his pupils the principles of these different sciences, puts questions to them, and exercises them in the composition of philosophical disquisitions. A few years ago the philosophical lectures were delivered in Latin, which tended to limit the study of the science ; but by the ordonnance of 1829 they must be given in French. The students in philosophy continue at the same time the mathematics, and attend a course of elementary physics. After a year's study of philosophy, the pupil is admissible to the examination for the *baccalauréat-des-lettres*, and if he has profited by his studies, he is fully competent to get through his exami-

nation. Youths who are intended for the Polytechnic school, or for the normal section of the sciences, or in general are designed for a scientific career, stay at college a year longer, and attend a course of mathematics called *special*, and a course of the physical sciences. Thus the youth who enters college at nine years of age will finish his studies at eighteen, if he wishes to obtain the degree of *bachelier-ès-lettres*; and at nineteen, if he intends to enter the Polytechnic school, or to follow any scientific pursuit.

Such are the college studies, which, indeed, are far from being faultless. Too much time is devoted to Latin, it being evident that with better methods, that language would be learned quite as well in a shorter time. In 1828 the minister of public instruction formed a commission to inquire into the different modes of teaching Latin and Greek in places of public instruction, and to determine in what respect such methods might be improved. We do not know what were the results of this inquiry; but there are improvements of a nature so obvious as to strike every one. Thus, as an instance, we may remark that the elementary classes of the colleges are too numerous, some of them containing as many as sixty pupils: they should be reduced to twenty. Boys who are commencing the study of the ancient languages require frequent attention from the master; and instead of two lessons per day—one in the morning, and the other in the afternoon, there should be three. The youngest pupils lose time in the rooms where they prepare their lessons; while, in the class-room, their attention is engaged, and their minds exercised. The boys also write too much. Up to the fifth class the instruction should be almost altogether oral. To translate the authors, and then to retranslate into Latin the French version of those passages which they had read a few days before, is the surest and the least disagreeable way of making them familiar with the grammatical forms of the Latin language. At present there is no emulation among the pupils but on the day when they write composition, in order to determine their places. By means of oral instruction, on the contrary, it is easy to form a system of continual emulation. When a pupil hesitates, or is mistaken, we might call on any other pupil to answer who feels confident that he can do better. By such, and similar methods, it is possible to keep youths in constant activity, and turn every moment to account.

Some methods of this kind are successfully followed in various private establishments; and one is surprised at the apathy of the university, that takes so little pains to introduce them into the colleges. Liberty of instruction we may expect to bring with it improvements, in this as well as other particulars: if a certain number of private places of instruction set the example, those of the government will be compelled to follow. If we can succeed in shortening the time spent on the ancient languages, the time gained might be employed on the modern languages, which are very much neglected in the colleges. The pupils can only acquire them by study during the play-hours; and, in this respect, they are put on the same footing as ordinary accomplishments. It is true that an ordonnance of

1828 decreed that modern languages should necessarily form a part of the college studies ; but hitherto this regulation has not been fairly and completely put in force.

All that has been said only refers to classical studies ; but, as we have already remarked, there are, besides this, in certain colleges particular classes of pupils, who attend courses adapted to prepare them for commerce, and other occupations of that kind. On this department it is unnecessary to say anything more.

The pupils are examined annually, about the month of March, by the inspectors of the university. According to the result of these examinations, prizes called *prix de semestre* are then awarded. At the end of the classical year there are other prizes given for composition. At Paris there is a competition (*concours*) among the seven colleges ; the college of Versailles is also admitted to this competition. Each of these establishments sends its best pupils : the prizes are given to the successful candidates, with great ceremony, by the minister of public instruction, assisted by the university council and the academic council of Paris. The minister reads an address in French ; and a professor of rhetoric pronounces a Latin discourse on the occasion. Sensible people, however, are not dazzled by this university show ; and for some time, an opinion has prevailed among them, that the general competition among the colleges of Paris does infinitely more harm than good. The professors, being unavoidably influenced by motives of personal vanity, direct all their attention to the cleverest pupils of their class, neglecting the rest almost entirely. We see sometimes that pupils will devote themselves exclusively to that kind of composition for which they have most talent. For instance, a member of the rhetoric class who makes good Latin verses, but has less talent for writing Latin and French prose, directs all his industry and efforts to his favourite object. Such pupils, who are known by the name of prizemen (*gagneurs de prix*), are often admitted gratuitously into institutions ; but as they must pay for their board *in success*, they are worked beyond all reason in that branch in which they excel. Such is the method which some heads of institutions employ to *puff* their establishments ; but it is done at the expense of all sound education ; it tends to substitute a factitious dexterity for sound knowledge ; it is the triumph of charlatanism over truth and good sense. The suppression of the general *concours* would produce two salutary effects : the pupils of average or ordinary capacity would not be sacrificed to those who are at the head of the class ; and the latter, though they would in certain departments dazzle much less, would acquire more general and solid knowledge.

The punishments of pupils consist principally of fines, confinement to the school, and *pensums*. To perform a *pensum*, is to copy a certain number of verses : this is really an absurd punishment, and ought to be immediately abolished. In place of it, we might substitute some select passages to be committed to memory during the hours of recreation.

**SIXTH QUESTION.—***What control is there with respect to persons who establish private schools on their own account? are they under the control of the Church?*

The heads of private establishments are, as we have remarked, under the superintendence of the University. If any great abuses are found in a private school, such school may be closed by a sentence of the University council, pronounced after the party accused has had an opportunity of replying to the charges. Private schools are in no respect under the control of the Church. We are inclined to think that the freedom of instruction which is proclaimed by the new charter, ought not to prevent the government from retaining some power of superintendence and discipline; but all judgments should be founded on the verdict of a jury.

**SEVENTH QUESTION.—***What is the education of the peasantry? are there libraries, and reading-rooms for newspapers in the small villages?*

The answer to the third question contains the answer to the first part of this.

In the villages there are neither libraries nor reading-rooms. Libraries are only found in the larger kind of towns. In most small towns there are rooms or societies, by means of which persons of moderate income have the use of journals on paying a small sum annually. But the poorer class read the journals very little, except at Paris and some of the great towns. It is much to be desired that there should be in France a number of journals designed purposely to aid the progress of knowledge among the people; but, hitherto, no journal has been established on this plan. In the journals we find little else but news, political discussion, and the impress of the passions of the day. Facts, principles, and modes of teaching, which are useful and of universal application, are seldom to be found there.

Little has been yet done to improve the rural population. The establishment of communal libraries in the county towns and larger villages would powerfully contribute towards the diffusion of knowledge in such places, and would tend to give to the inhabitants a useful impulse. A draught of an ordonnance with this view had been prepared by the Ministry of 1828. It was the plan to establish libraries at first in the chief towns of the canton, and by degrees to extend them to the other communes: the libraries were to have been placed under the care of the primary instructor, and superintended by the municipal authority. The main stock of the books were to consist of the lives of great French generals; of the most skilful agriculturists, with an account of their discoveries; the lives of illustrious men who had risen from the body of the people; the life of Henry IV.; moral poetry; books on natural history; the gardener's and labourer's manual; and other books of a similar character to those enumerated. Such an institution would have at once aided the progress of useful knowledge, and

have improved the national character. At the moment when it was going to be put in operation, the 8th of August came, and the draught of the ordonnance had the ill fortune to be lost among the official papers.

**EIGHTH QUESTION.**—*What is the education of artisans in the towns? are there any libraries and reading-rooms for their use? what means have they for obtaining any scientific knowledge of the principles of their respective arts?*

This question has been already answered pretty fully under Nos. 3 and 7. We may add, that in all places where there is a public library, it is open gratuitously to all persons; that reading-rooms are entirely undertaken as private speculations, and are open to all persons, artisans included, who may choose to subscribe to them; but, in general, artisans make very little use of the libraries and reading-rooms.

In the answer to question three we stated what measures had been taken to instruct artisans in the scientific principles of their arts, and what satisfactory results had followed.

**NINTH QUESTION.**—1. *What are the expenses of a medical student attending the course of the medical faculties of Paris, Montpellier, and Strasbourg?*

2. *What particular advantages does each of these three places offer?*

3. *How may a student, who is a foreigner, obtain the greatest amount of instruction at the least expense?*

A student will find the best opportunities for study at Paris, but the expense of living there is greater than at either of the other two places; Strasbourg is the cheapest of the three. Imperfect knowledge of the country, and the necessity of having some one to assist him in his dissections, necessarily impose some expenses on a foreigner which a native can avoid, because he meets with other students from his own part of the country who are senior to himself, and who readily give him their aid in dissections. The great concourse of students at Paris renders it somewhat difficult to procure subjects, and they are consequently rather dear, costing nine francs a piece when not injected, and twelve francs when they are; besides this, some small sum is paid to the keeper of the dissecting-rooms.

The hospitals may be attended without payment, as well as all the clinical lectures on medicine and surgery; but to the expense of a residence at Paris, we must add the fees (*prix des inscriptions*), which must be paid even if the foreign student does not intend to take a degree in France. The following decision of the Faculty of Paris, of December 13, 1810, has reference to this:—Professors cannot give, in their own name, any certificate to a pupil who has attended the public courses of the school, unless it be proved to them that the pupil has paid his fees for these courses. In all cases it is necessary to be entered or registered on the faculty books in order to obtain tickets of admission to the courses.

A pupil can only commence in the first *trimestre* of the medical year or session, which begins on the 1st of November and ends on the 31st of August. The vacation is two months. In very special cases, the minister allows a student to commence in the *trimestre* of January; but he is never permitted to commence his course of studies for the degree of doctor in the third *trimestre* of the year. The degree of *bachelier-ès-lettres* is a necessary qualification for commencing medical studies.

The studies of each year are thus divided:—

1st year . . Winter . .	Anatomy. Physiology. Chemistry.
Summer . .	Physics ( <i>physique</i> ). Medical Natural History. <i>Hygiène</i> .
2nd year . . Winter . .	Anatomy. Physiology. Operative Surgery.
Summer . .	<i>Hygiène</i> . Practice of Physic. ( <i>Pathologie interne</i> ). Pharmacy.
3rd year . . Winter . .	Operative Surgery. Practice of Surgery. ( <i>Pathologie externe</i> ). Practice of Physic.
Summer . .	Medical <i>clinique</i> . ( <i>Clinique interne</i> ). Surgical <i>clinique</i> . ( <i>Clinique externe</i> ). Materia Medica.
4th year . . Winter . .	Medical <i>clinique</i> . Surgical <i>clinique</i> . Internal Pathology.
Summer . .	Legal Medicine. Therapeutics. Midwifery.

Independent of the instruction given in the *general* courses, there are instituted in the school, in all the branches taught, private courses for the benefit of the best pupils. These pupils are entitled *élèves de l'école pratique*. Admission to this school is open to competition; and there is also an annual competition during three years among these pupils for the school prizes. Three first prizes entitle a pupil to gratuitous admission.

The *concours* for the *élèves de l'école pratique*, of the first year, is founded on the medical sciences, which must be studied during the first four *inscriptions*; for those of the second year, on the sciences studied during the first eight *inscriptions*; and for those of the third, on the medical sciences, which ought to be studied during the first twelve *inscriptions*. Foreigners are admitted to compete with natives.

The *élèves de l'école pratique* have considerable advantages: they pay less for subjects; they perform chemical manipulations under the superintendence of the professors or the *agrégés*; they

receive tickets of admission to the private courses of the *agrégés*, which are given in the building belonging to the faculty; to the courses of the professors of anatomy and his assistants (*aides*); and to those of the clinical professor's assistants; they have also admission to the library of the school and to the anatomical museums, when they are not open to others. These facilities for study help to diminish the expense of the dissections and of the private courses which the pupils are obliged to attend, in addition to the courses of the faculty.

Medical pupils, foreigners as well as natives, between the age of eighteen and twenty-four, are allowed to witness the practice of the hospitals to which they are admitted, first as out-door pupils (*externes actifs au suppléans*), and then as in-door pupils (*internes*): these situations are open to competition. For several years past English and Swiss students have not only been admitted as *externes* but also as *internes* in the hospitals. The *external* is for three years, and the *internat* for four; but from the first year of the *externat* a pupil is admissible to the *internat*. The *externes* who are attached to an hospital in the suburbs of Paris can be accommodated with lodgings there, and have also ample means for dissection.

Students, who are *internes*, receive an allowance of 500 francs and lodgings; if they are also maintained in the establishment, the allowance is 100 francs. The situation of *interne*, in the Paris hospitals, gives a student the opportunity of acquiring excellent practical knowledge. In no other place can he find such advantages; among which the diminution of his expenses is not one of the smallest.

The following sums are paid into the three faculties: for the doctorate, 1100 francs, as follows:—

University fee . . . . .	785 francs.
Fee to the professors for examinations . . . . .	215
Fee on the seal of the diploma . . . . .	100

The payment of this sum is made in parts, in the following manner:—

Fifteen <i>inscriptions</i> for three months' courses . . . . .	750	785 francs.
The sixteenth . . . . .	35	
Five examinations, at 30 francs each . . . . .	150	
Thesis . . . . .	65	
Fee on the seal of diploma . . . . .	100	165
		1100

The pupil has also to pay the expense of printing his thesis. The thesis and diploma seal are paid for at the same time.

The medical faculty of Paris offers much higher advantages to the student than the other faculties. From 120 to 150 francs per month is quite a sufficient sum to enable a student to live comfortably at Paris: clothing and the expense of the *inscriptions* are not included in this.

At Montpellier the student will find few advantages. There are

good professors at this place, but subjects for dissection are scarce, and there is not much disease to be seen in the hospitals ; yet students might find it useful to visit this celebrated school.

At Strasbourg the pupil will find more opportunities for dissection, and will get subjects cheaper ; the price of them is three francs. As four generally join at a subject, this makes the cost 75 centimes for each ; but it is usual to pay one franc each, the remaining franc going to the servant. At Strasbourg the instruction is more elementary, and consequently better adapted for beginners. In the clinical department each pupil has the care of one or more patients, under the superintendence of the professor. At Strasbourg there is a clinical establishment for midwifery, to which all pupils of the third and fourth years are admissible : they are summoned when a labour comes on, and they have also weekly opportunities, under the direction of the professor, of making practical inquiries, for the purpose of ascertaining the stage and other circumstances of the pregnancy (*ils peuvent pratiquer le toucher*).

From sixty to eighty francs per month is sufficient at Strasbourg for board and lodging. But the low price of living induces many pupils to pass their time in the *cafés* and beer-shops, and give themselves up to debauchery.

The clinical establishments of Strasbourg contain but few patients, and operations too seldom occur to enable a student to become a good surgeon. With two or three exceptions, the professors enjoy no great celebrity.

To sum up all, we may say that the expense, as far as University charges are concerned, is the same in the three faculties ; and that, if a student finds living dearer at Paris, this is amply compensated by the superior advantages of the metropolis. If the pupil can get admitted into the hospital as an *interne*, the expense will be less at Paris than in either of the other two faculties.

**TENTH QUESTION.—*What is the legal education in France ? the time and expense that it requires ?***

We have not much to add to the information which the answer to the first question contains on this subject. The degree of licentiate is sufficient, as we have already said, to enable a person to become an advocate, and to fill the various offices of the courts and tribunals. To attain this degree three years of study are necessary. The whole expense, *inscriptions*, examinations, theses, and diploma, amounts to 750 francs. The degree of doctor requires one year's study more, and an additional expense of 460 francs. Few persons take the degree of doctor except those who intend to be teachers of jurisprudence.

To be admitted licentiate it is necessary to undergo four examinations, and to have written one thesis ; and to take the degree of doctor, two additional examinations, and one more thesis, are necessary.

The examinations for the degree of licentiate are on the civil

code, the institutes of Justinian, and the procedure of the courts. In the faculties of law, where there is a chair of *droit administratif*, the students are also examined on this branch of jurisprudence. The examinations for the degree of doctor are on all the subjects taught in the faculty.

In general the studies required in the faculty of law are not considered sufficient to make a complete lawyer. Most students add to the regular course of studies some experience in the office of an *avoué*, by which they acquire habits of business, and a practical knowledge of the forms of proceeding. After this they attend the courts, which is termed *faire son stage*: a person cannot have his name entered on the list of advocates until after three years' attendance of this kind. The *Stagiaires* form societies of their own body, under the title of *conférences*, in which they exercise themselves in pleading on imaginary cases, and in discussing questions of law. To become a magistrate it is necessary to have attended the courts for two years.

The French codes are simple and clear, but it was not possible for them to comprise every case. Whenever, therefore, difficulties arise which they have not provided for, it is necessary to recur to the general principles of law; so that, in its whole extent, the science of law is perhaps as extensive and as laborious a study in France as in other countries. The reports of the judgments of the different courts in the kingdom, of themselves make a library; and it is absolutely necessary to study them, because to know the laws is not enough, without knowing also the way in which the courts interpret and apply them. The management of a cause is also an embarrassing and complicated kind of business. After stating these facts we cannot be surprised if the most skilful lawyers continually find something to learn.

It is a pretty general wish that the government should establish chairs of *droit public* and of *droit administratif* in all the faculties. These chairs only exist in certain faculties, as we have seen in the answer to the first question. Chairs of public economy and statistics should also be established, for these sciences are not sufficiently diffused in France. In a government like the French, the knowledge of the lawyer and that of the *publiciste* should unite and mutually aid one another.

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## REVIEWS.

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### PLUTARCH'S LIVES.

*Plutarch's Lives translated from the original Greek ; with Notes Critical and Historical, and a Life of Plutarch, by John Langhorne, D.D., and Wm. Langhorne, A.M., in 6 vols. The Second Edition, by the Rev. Francis Wrangham, M.A., F.R.S., with Corrections and Additions. 8vo. London, 1813.*

It is with profound reverence that we undertake to speak of Plutarch in a journal that is exclusively devoted to a most important object, the advancement of liberal education. We attribute the feelings of respect and deference which fill and even oppress our minds, not to our deep sense of admiration for that marvellous learning, which acquired many ages ago for the philosopher of Chaeronea, the homage of his contemporaries, and has preserved unimpaired through succeeding generations to the present day, his best and purest glory ; nor yet to our conviction, that he is well entitled to all the encomiums that have been heaped upon him with an unsparing hand. In his own language he has been named by his countrymen, ὁ Θεωρέσιος, ὁ Θειότατος, ἡ φιλοσοφίας ἀπάντης ἀφροδίτη καὶ λύγα ; he has been recognised by Wyttenbach, a modern possessed of the erudition of an ancient Greek, as one gifted with ‘*infinita et ferè divinæ doctrinæ copia*,’ and in the long interval that separates the scholars of the first centuries of our æra from the nineteenth, he has uniformly been hailed with the like applause. We hesitate, however, and feel that we are unable to speak of this wise man as we would, not because he is, as Scaliger declared, and as far as we are able to estimate his value, most justly declared, ‘*totius sapientiae oculus*,’ but because he is the representative of the education of the ancient world ; because ‘cet homme noble, consommé en tout rare savoir,’ as he is styled by one of the most respectable of his admirers, stands before us as the legate, the ambassador, the orator on behalf of those institutions, whereby in the old time men were rendered wise and virtuous. The magnitude and the difficulty of the subject, when we view him, as we ought, in this character, and the paramount importance of his mission impede us in the brief examination, which we have proposed to ourselves, of matters, that to a superficial observer will possibly appear to be not merely easy, but stale and trite, and compel us to beg

for indulgence in writing concerning a theme, that at first sight may seem worthy only of the exercise of a schoolboy.

With a sedate and composed learning, with genius tempered by a most solid judgment and a rare moderation, Plutarch sedulously and unceasingly enforces the necessity of a careful education ; he urges the solemn duty of instructing the young with an equable and resistless flood of words, of arguments and of examples, that proceeding onwards, like the flowing tide, surmounts, or bears down, every obstacle. What can be imagined more learned than Plutarch, one of his admirers asks ; what that is wiser has ever appeared since the creation of man ? It is in exhorting the old to teach and the young to learn, that the whole of his learning and wisdom are uniformly exerted ; nor is it for the sake of erudition, it is not to attain to proficiency in science, that he repeats and strengthens his exhortations, although he values knowledge higher than other writers for its own sake, but he chiefly prizes, and principally labours to recommend knowledge, because knowledge is the foundation of virtue, the solid basis of morals, and upon morals ; as he perpetually inculcates, all real excellence, all happiness and prosperity, whether public or private, can alone securely rest.

There is no other author, ancient or modern, of whose writings morality is so manifestly and unquestionably the sole and entire scope ; that sound, undeviating morality, which is created by a rational and elaborate education : it is no wonder then, if the instructors of youth feel and express much anxiety, when they attempt to speak of such a man ; for, if it were possible that Plutarch should be contemned, their honourable occupation must of necessity cease, and in proportion as his merits are recognised and appreciated, will the anxious, but pleasant, toil of imparting knowledge be productive of good fruit. Those particulars of his life, which have been transmitted to us, are generally known. He was born at Chæronea, a town in Bœotia, in the latter part of the first century : and his distinguished ability would be almost sufficient in itself to remove the imputation of stupidity under which the inhabitants of his native country laboured. He resided for some time at Rome, and enjoyed the friendship and patronage of Trajan, a wise and virtuous prince : such things as these, with which all persons are acquainted, it would be tedious to repeat. During his residence in Rome he was eminent as a teacher of philosophy, and it has been conjectured that many of the treatises which form the bulky collection of ethical, literary and historical works, designated by the title '*Moralia*,' were origin-

ally delivered as lectures to his numerous and illustrious audience. This miscellaneous assemblage is rich in choice morsels of philology, philosophy, and history, and is so intimately connected in many respects with education, that it might deserve notice, if our attention were not called towards a more important and popular work.

The well known saying of the learned Theodore Gaza may be applied to Plutarch as the author of the '*Moralia*', that if Plato, Plutarch, and Pliny were preserved, none of the sciences would be lost ; but it is doubtless to the author of the Parallel Lives, that the still higher tribute of praise was rendered by the same ingenious person. '*Ego quidem cum Theodoro Gaza sentio, qui interrogatus, si omnes libri perdendi essent, et si optio daretur, quem servatum vellet, Plutarchum dixit. Est enim verè thesaurus eorum, quæ præstantissima in omnibus aliis scriptoribus sparsim inveniuntur, sive philosophiam, et alias disciplinas, sive historiam Græcam et Romanam spectes.*' It is not the object of this article to discuss the historical value of Plutarch's Lives. That he is very often careless and inaccurate, we readily admit ; but, on the other hand, we contend that he has preserved the knowledge of more curious facts than a superficial reader of his Lives may be inclined to acknowledge. The latter work most probably extorted from a bigoted Byzantine the wish which he has expressed in eight quaint verses, that if it be possible for any of the heathens to be saved, Plato and Plutarch may enjoy that happiness. But our love for the writer of volumes that are not less full of incentives to virtue than of curious and attractive matter, leads us needlessly to repeat the laudatory testimonies of which no one can be ignorant. We have no desire to create surprise by uttering a paradox, when we affirm, that Plutarch's Lives are known to all and to few. Such, however, is literally the case ; but, as is usual in startling assertions, one word in the proposition is used in more than one sense, and that word in the present instance is *known*. Through the medium of an unfaithful translation they are imperfectly known to every reader ; but they are perfectly known to a small number of persons only, for few, very few in comparison with the multitude, who have found delight and instruction in the various interpretations, have read any portion of the original. We may assert, indeed, without fear of contradiction, that they are but few absolutely ; of those who are able to read Greek with tolerable facility, the majority are detained by those authors, whose claims upon their attention are more immediate, and are deterred by apprehensions of difficulty, and by certain errors and prejudices, of which we will briefly speak.

If, however, the course of instruction were as enlarged and generous as the most sanguine could anticipate, the entire amount of students, who could be admitted to collect the deep sense of Plutarch from his very words, would never be considerable. We earnestly desire that as many as possible should participate in the pleasure and profit that we have ourselves derived from an attentive perusal of the Greek text, but this, however desirable, is not the principal object of our solicitude: we do not long, with respect to this author, for an aristocracy of learning, although we are not unwilling that the nobles of literature in some other departments of knowledge should enjoy whatever honourable and valuable privileges their superior talents and industry can win; we claim a commonwealth of instruction, a pure republic of institution in the precepts and examples of morality; we aspire after a full and idiomatic translation into our mother-tongue. A translation into such English, that the learned may be able to point out in a satisfactory manner, the causes of the delight they feel in perusing it, and the unlearned may not know why they read it with so much pleasure; a translation so full, that no portion of the ample meaning of the original may escape, and so plain, that there may be no obscurity in the style; no other difficulties than those, which are inherent in the matter itself.

We regret much that no such version exists in our language. The first edition of the Greek text of Plutarch's Lives appeared at Florence in the year 1517, and two years afterwards it was republished by Aldus. From the first revival of letters in Europe, several Latin versions were successively printed, some of these most probably were of considerable antiquity, being copied from old MSS.; for Joannes Sarisberiensis, who extolled him in the twelfth century, had certainly only read his works in Latin. The first translation into any living tongue we are commonly told was made by Lodovico Domenichi, who rendered it into Italian with much brevity and spirit; it was published at Venice by Giolito in 1560, and forms one of the gems in the famous Collana. It was afterwards republished by Sansovino, who corrected it in many places, as he informs us, from Latin versions, and from the Greek text; it is a very respectable performance; the style, if a foreigner may presume to judge of such a matter, being agreeable, and we have sometimes found, that Domenichi was faithful to the original, where subsequent translators were in error. Dominique Ricard appears to speak of this work, as if Sansovino, and not Domenichi, had been the translator, and our interpreters, who have collected

industriously the blunders of all nations, have adopted the mistake, as well as the assertion, that it was the first translation into a modern tongue.

Before the publication of the Greek text at Florente, the *editio princeps* had already appeared at Rome; a Latin version by different hands, by about eight persons, was printed about the year 1470, in folio, and it affords a beautiful specimen of early typography. It has been conjectured that this first and princely edition forms the base of all the vernacular versions, the translators having sometimes amended them by an occasional comparison with the Greek text, but more frequently impaired the sense by a collation with other and less faithful Latin interpretations, and destroyed the vigour by paraphrastic expositions of those passages that seemed to be of difficult comprehension to ordinary readers; it is certain that the Italian translation of Domenichi is taken from the *editio princeps*, and it retains the brevity of the model. Jaconello, of Riete, however, had already produced a vernacular translation of Plutarch's Lives. It was handsomely printed in quarto at Aquila, in the year 1482; it resembles the *editio princeps* in many respects, but in others it gives a different sense, and the style is more diffused. Being soon superseded by Domenichi, it was neglected and forgotten. We have seen the first part only, containing twenty-six lives, and we know not if the remainder was ever published. Whether any one of the languages of Europe possesses a version, that was made immediately from the Greek, it is not to our present purpose to inquire; it is unhappily but too easy to convince ourselves that our own is not so fortunate, nor have those translations, from which our English interpreters have chosen to borrow, flowed directly from the native source.

In the year 1559 appeared the excellent translation, of which it has been said, ' quoique en vieux Gaulois, elle a un air de fraîcheur qui la fait rejoinir de jour en jour :' the author compared it in many places with the Greek text, both as it was found in the printed editions, which then existed, and in some MSS. to which he had access, and he made some alterations; but on account of the corrupt state of the original, and possibly through want of critical skill, they were not unfrequently for the worse; his meritorious work, however, was certainly not drawn from the Greek, but, like Domenichi, from the Roman version.

' L'office d'un propre traducteur,' says the illustrious Amyot in his preface, ' ne gist pas seulement à rendre fidèlement la sentence de son autheur, mais aussi à representer aucunement et à adom-

brer la forme du style et maniere de parler d'iceluy.—Car encore puis je bien assurer, quelque dur ou rude que soit le langage, que ma traduction sera beaucoup plus aisée aux François, que l'original grec à ceulx mesmes qui sont les plus exercitez en la langue grecque pour une façon d'escrire plus aiguë, plus docte et pressée, que claire, polie ou aisée, qui est propre à Plutarque.'

The peculiarities in the form of style and manner of speaking, which Amyot ascribes to Plutarch, are more conspicuous in the version, from which he generally derived his admirable work, than in the philosopher himself. ‘*Vetus interpres Gallicus,*’ says the acute Reiske of Amyot; ‘*vel potius is qui illi in ista interpretatione præibat;*’ it is impossible, indeed, to pretend that his translation, however valuable, was made directly from the Greek. It is certainly most desirable to possess a full and faithful version, that shall exactly give the precise meaning of the original, without exceeding, or falling short, in any instance, of the just sense of the author; such a minutely accurate copy is the object of our earnest wish; nevertheless there is one other possession that we covet even more—it is a picture that shall live, breathe, and move;—a copy that shall have the spirit and animation of the original. Herein consists the true greatness of Amyot; his transcript of the ‘*opus aureum, diurnâ manu nocturnâque versandum,*’ is not less fresh and legible, than the autograph of the Boeotian penman. We shall understand how much we are indebted to history; he says: ‘*Si nous imaginons seulement en quelle horreur de tenebres, et quelle fondrière d'ignorance bestiale et pestilente nous serions abysmez, si la souvenance de tout ce qui s'est fait, ou qui est advenu avant que nous fussions nez, estoit entierement abolie et esteincte.*’ His novelty and vigour of expression, as exhibited in the fragment of a sentence, which we have cited, demonstrate at once, more plainly than any language we could employ, his singular fitness for the cheering office of infusing into the readers of his own day a relish for the consummate and most finished judgment of Plutarch. His countrymen still love and cherish the venerable translation of the grand almoner of France, although it has sometimes been criticised unfavourably by persons who had no feeling for its beauties, and were insensible to its merits; what boots it that a writer of so much energy occasionally fell into a few faults, which were chiefly caused perhaps by the corruption of the Greek text? Many, and handsome editions have spread abroad, and have handed down, for nearly three centuries, this distinguished ornament of French literature. If our limits would permit, we would gladly set forth some

specimens of the rare felicity of this interpreter. This celebrated version gave birth to the first English translation ; Sir Thomas North dedicated to Queen Elizabeth, in the year 1579, a work, which his preface shows he had executed with a hearty good will.

' There is no prophane studie better than Plutarke,' says the worthy knight, ' all other learning is private, fitter for universities then cities ; fuller of contemplation then experience ; more commendable in students themselves then profitable unto others. Whereas stories are fit for everie place, reach to all persons, serve for all times ; teach the living, revive the dead ; so far excelling all other books, as it is better to see learning in noblemen's lives, then to read it in philosophers' writings. Now for the author : I will not deny that love may deceive me, for I must needs love him with whom I have taken so much pain ; but I believe I might be bold to affirm that he hath written the profitablist storie of all authors. For all other were fain to take their matter as the fortune of the countries whereof they wrote fell out ; but this man being excellent in wit, learning, and experience, hath chosen the special acts of the best persons of the famousest nations of the world. But I will leave the judgment to yourselves, my only purpose is to desire you to excuse the faults of my translation with your owne gentlenesse, and with the opinion of my diligence and good intent.'

This valuable translation was avowedly made from the French of Amyot ; but the ingenious interpreter was gifted, like his precursor, with so much spirit and native talent, and performed his good office with so much ability and diligence, that it was a precious addition to English letters ; and being animated with that vivid force, which separates dead writers from the living, it was much read and admired in its day, and is still, beyond comparison, the best version of the parallel lives that the English tongue affords. We cannot deny ourselves the pleasure of transcribing one beautiful passage, especially since the volume, if not scarce, is at least not very common :—

' Cato would say he never bought bondman or slave dearer then a thousand five hundred pence, as one that sought not for fine made men, and goodly personages, but strong fellows that could away with paines, as carters, horse-keepers, neatherds, and such like : and againe he would sell them when they were old, because he would not keepe them when they could do no service. To conclude, he was of opinion, that a man bought anything deare, that was for little purpose : yea, though he gave but a farthing for it, he thought it too much to bestow so little, for that which needed not. He would have men purchase houses, that had more store of arable land and pasture, then of fine hortyards or gardeins. Some say, he did thus for very misery and covetousnesse : other thinke and tooke it that he lived so sparingly, to move others by his example

to cut off all superfluity and wast. Neverthelesse, to sell slaves in that sort, or to turne them out of doores when you have had the service of all their youth, and that they are grown old, as you use brute beasts that have served whilst they may for age: me thinkes that must needes proceed of too severe and greedy a nature, that hath no longer regard or consideration of humanity, then whilst one is able to do another good. For we see, gentlenesse goeth further then justice. For nature teacheth us to use justice only unto men, but gentlenesse sometimes is shewed unto bruite beasts: and that commeth from the very fountaine and spring of all curtesie and humanity, which should never dry up in any man living. For to say truly, to keep cast horses spoiled in our service, and dogs also, not only when they are whelpes, but when they be old: be even tokens of love and kindnes. As the Athenians made a law, when they builded their temple called Hecatomedon: that they should suffer the moyles and mulets that did service in their carriages about the building of the same, to graze every where, without let or trouble of any man. And they say, there was one of their moyles thus turned at liberty, that came herselfe to the place to labour, going before all the other draught beasts, that drew up carts laden towards the castell, and kept them company, as though she seemed to encourage the rest to draw: which the people liked so well in the poore beast, that they appointed she should be kept whilst she lived, at the charge of the town. And yet at this present are the graves of Cimon's mares to be seene, that wun him thrice together the prize of the horse-race at the games Olympian, and they are hard by the grave of Cimon himselfe. We heare of diverse also that had buried their dogs they brought up in their house, or that waited on them: as among other, old Xanthippus buried his dogge in the top of a cliffe, which is called the dog's pit till this day. For when the people of Athens did forsake their city at the comming downe of King Xerxes, this dogge followed his maister, swimming in the sea by his galley's side, from the firme land, unto the isle of Salamina. And there is no reason to use living and sensible things, as we would use an old shoo or a rag, to cast it out upon the dunghill when we have worn it, and can serve us no longer. For if it were for no respect else, but to use us alwais to humanitie, we must ever shew ourselves kind and gentle, even in such small points of pitie. And as for me, I could never find in my heart to sell my draught oxe that had ploughed my land a long time, because he could plough no longer for age: and much less my slave, to sell him for a little money, out of the country where he had dwelt a long time, to plucke him from his old trade of life wherewith he was best acquainted, and then specially, when he shall be as unprofitable for the buyer, as also for the seller. But Cato, on the other side, gloried that he left his horse in Spaine he had served on in the warres during his consulship, because he would not put the commonwealth to the charge of bringing him home by sea into Italie. Now a question might be made of this, and probable reason of either side, whether this was noblenesse or niggard-

linesse in him : but otherwise to say truly, he was a man of wonderfull abstinence.'

To convince our readers how unworthy the languid, feeble interpreters, of whom we will speak presently, are to supply the place of a writer so spirited as Sir Thomas North, we will set before them a passage from the Life of Plutarch by the Langhornes :—

' But when we bring him to the school of Pythagoras, what idea shall we entertain of Plutarch ? Shall we consider him any longer as an academician, or as a citizen of the philosophical world ? Constitutionally benevolent and humane, he there finds a system of divinity and philosophy perfectly adapted to his natural sentiments. The whole animal creation he had originally looked upon with an instinctive tenderness : but when the amiable Pythagoras, the priest of nature, in defence of the common privileges of her creatures, had called religion into their cause ; when he sought to soften the cruelty, which man had exercised against them, by the honest art of insinuating the doctrine of transmigration ; how could Plutarch refuse to serve under him ? It was impossible. He adopted the doctrine of the Metempsychosis. He entered into the merciful scheme of Pythagoras ; and, like him, diverted the cruelty of the human species, by appealing to the selfish qualities of their nature, —by subduing their pride, and exciting their sympathy, while he showed them that their future existence might be the condition of a reptile. This spirit and disposition break strongly from him in his observations on the elder Cato. And as nothing can exhibit a more lively picture of him than these paintings of his own, we shall not scruple to introduce them here.'

The author of the letters of Theodosius and Constantia then presents, in his own puny and affected phrases, the passage which we have cited from Sir Thomas North, and continues thus :—

' What an amiable idea this extract gives us of our benevolent philosopher ! how worthy the instructions of the sage of Samos ! how honourable to that master of truth and universal science, whose sentiments were decisive in every doubtful matter, and whose maxims were received with silent conviction ! '

It is evident that this writer was not a fit person to be the representative of Plutarch with the British nation. North's translation was nearly superseded by that which was published under the auspices of Dryden, and was executed, like the versions that constituted the *editio princeps*, by several, but more numerous hands : it was hurried over with a carelessness and inaccuracy quite worthy of the admirable but most negligent manager of the company. This joint work, which has properly been termed motley, is inconsistent, unequal, and deformed by many gross errors ; but several of the contri-

butors were men of learning and ability, and some passages are rendered with spirit. It is, however, in all respects, save only that the language is less antiquated, inferior to Sir Thomas North's version, as it is superior to that of the Langhorne's, whose merit is limited to having rectified numerous mistakes. These two last translators were totally unfit to fill in a becoming manner the manly office which they took upon themselves, and they uniformly and entirely failed in the more important functions of interpretation. Dryden's company did not by any means perform what the publisher promised the reader, namely,—‘ To transfuse the very spirit of the original into the traduction ; and, in one word, to make Plutarch's worthies yet more famous, by a translation that gives a further lustre even to Plutarch himself.’ But the Langhorne's have made a worse bargain for us than the hasty, needy bard who preceded them; for the trifling advantage of a little additional correctness they have transmuted the solid gold of the Chæronean into vile pinchbeck and tawdry tinsel. The translation of Plutarch's Lives, by Dacier, was preceded by another French version of small repute, the story of which has been thus briefly told :—‘ Les Vies de Plutarque furent traduites dans le siècle dernier par l'Abbé Tullemant, que Boileau appelle le sec traducteur du Français d'Amyot.’ Dacier was a man of great learning, and if he did not derive his translation altogether from the Greek text, he certainly had it always before him, and frequently consulted it in the course of his long labour. Scholars admire his erudition, and his countrymen commend the purity of his style, but his version was never popular. Having condemned the style of Plutarch, Dacier says, in his preface,—

‘ Dans la traduction je tasche de conserver toute la force qu'il a, et j'aurois bien voulu pouvoir lui donner les agrémens qui lui manquent. Je separe, et je renverse mesme ses périodes, quand elles sont trop embarrassées, ou que le génie de notre langue ne s'accorde pas de l'ordre qu'il a suivi.’

Some people are always tormented by an itch to improve everything, by a desire, ‘luy donner les agrémens qui luy manquent.’ Dacier cuts the periods of Plutarch into shreds, and exhibits to his readers a Gallicized Greek; but he more commonly errs by producing a paraphrase instead of a translation. Amyot, notwithstanding his vivacity, is sometimes paraphrastic; but Dacier has increased this defect to such an extent as to have succeeded almost in making Plutarch unreadable. A subsequent translator, Dominique Ricard, says the style of the original is some-

what diffuse, but the amplifications of Dacier have rendered it repulsively prolix ; ‘ il y règne une monotonie qui a fait dire à une femme d'esprit,’ who is doubtless the highest authority in the opinion of a French critic, ‘ que sa traduction avoit l'air triste.’ The learned Dacier allows that ‘ c'est dans le bon-sens que sa plume est toujours trempée ;’ it is a whimsical figure, although it be just, to say that Plutarch always used good sense instead of ink : having acknowledged the excellence of the matter, he is unjust to the manner of the philosopher, and unduly depreciates his style. ‘ Tamen dissimulare non possum ;’ Vossius writes concerning Plutarch, ‘ Dictionem ejus gravem quidem esse, sed duriusculam videri. Verum leviculum hunc defectum multijugâ adeo scientiâ abunde summus vir compensat.’ This is the rational censure of a scholar ; others have affirmed that he forms the judgment of youth, and leads more certainly to wisdom and virtue by a diffuse and plain way of writing than a more artful and subtle teacher. Some critics have even declared that his diction is *aspera morosaque*. Those atticsists who are offended by every phrase or word that does not occur in the works of some five or six writers, and who would reject Demosthenes, if he were without the pale, because his language differs from that of Xenophon or of Plato, and are ready to condemn Herodotus as an ignorant and most Ionic barbarian, may reasonably complain of the morose asperity of a remote savage, whose native place was full eighty miles from Athens. Thus certain purists of Italy will not tolerate any modes of speech that cannot boast the authority of Boccaccio ; and, at the revival of letters, a certain sect in the same country, would not endure any phraseology but that of Cicero, deeming Cæsar and Livy, of course, unworthy of the name of classics. The last form of unmanly affectation has been ridiculed most felicitously by Erasmus, and the productions of all such effeminate pedants are of necessity cold and insipid. We cannot wonder if the style of Plutarch is proscribed by these persons, and the silly censure has been repeated, because it supplies a convenient excuse for neglecting an author who certainly presents, at first, some difficulties, and is not without obscure and intricate passages, which perplex even the experienced philologist. In consequence of this neglect, it was long before the public received an amended and purified text. And the ignorant having repeated and aggravated, as they are wont, the mitigated censure of scholars, the character of Plutarch’s style has been finally deemed by many as utterly barbarous, and translators have been brought to believe that they might

render his energetic and pregnant periods in any language they chose to adopt, or might even venture upon the more offensive injustice of improving their author, and were at liberty '*luy donner les agréments qui luy manquent.*'

The laboured, but unsuccessful, translation of Dacier produced two recensions of Dryden's 'motley' version, of which it is unnecessary for us to speak: it produced also that of the Langhornes. Dacier had injured his author by the large infusion of the watery paraphrase in which he delighted, and reduced his pages to a condition resembling the interpretation which was printed in the margin of the Delphin editions, in order to explain the text to the most Serene Prince and to other learners; to read the parallel lives in this form, therefore, would be to peruse Virgil or Horace in the *interpretatio*, or rather, perhaps, Cæsar or Sallust, if the editors had furnished us with the means of making so cruel an experiment. The Langhornes compared the French of Dacier, whose notes they abridged, with the Latin translations which accompanied the later editions of the Greek text, for the Latin interpretations had been amended and corrected by the Greek: it is possible, moreover,—it is barely possible, that they may sometimes have consulted the Greek itself.

'Sensible that the principal art of a translator is (these good men declare) to prevent the peculiarities of his author's language from stealing into his own, they have been particularly attentive to this point, and have generally endeavoured to keep their English unmixed with Greek. At the same time it must be observed that there is frequently a great similarity in the structure of the two languages; yet that resemblance, in some instances, makes it the more necessary to guard against it on the whole. This care is of the greater consequence, because Plutarch's Lives generally pass through the hands of young people, who ought to read their own language in its native purity, unmixed and untainted with the idioms of different tongues.'

He must be a very grave, and therefore, probably, a very wise man, who can read this passage without laughing heartily, and a very credulous one if he can believe that the person who wrote or adopted it was qualified to translate any author from any ancient language into any modern tongue. It is certain, at least, that Dr. John Langhorne and his brother William have been eminently successful 'in preventing the peculiarities of their author's language from stealing into their own,' and 'in keeping their English unmixed with Greek.' In speaking of a translaton by such persons the question is, not whether this, or that, or any passage be faithfully rendered, but whether a mind of such a texture and

dimensions can convey to us the majestic morality of Plutarch, and stand in the place of the representative of the education of the ancient world?

Dr. John Langhorne is the author of several works designed for young ladies; they are not of the first class in that very humble department of letters; affected, insipid, barren, but moral enough perhaps, for if they were not, what would they be? All who have examined these feeble efforts will shudder at the thought of consigning Plutarch to such unworthy hands. William Langhorne is known as the author of some sermons. It was not till some time after the publication of the Langhernes' version, that a new edition of it appeared by Archdeacon Wrangham. We always feel peculiarly grateful for any contribution to good letters from those to whom fortune has given leisure and affluence, and we are anxious to favour and encourage, and to view in the most flattering light, such accessions. In the present instance, however, so worthless are the additions that have been made to a work in itself of small value, that it is impossible for the most indulgent critics, unless they can consent to forego the critical office altogether, to refrain from noting the work, of which the title is prefixed to this article, with distinct and unequivocal censure. The alterations in the translation are very insignificant. The editor gives the following account of his labours in his preface:—

'The translation of Plutarch's Lives by the Langhernes is almost the only one ever opened by the English reader: and had it not been marked by some slight incorrectness of version, especially in the poetical quotations, some few trivialities of diction, some capricious omission of paragraphs—which are now, without any violation, it is hoped, of delicacy, inserted,—and some considerable deficiencies in the notes, the present editor would have shrunk from touching a work executed upon the whole in so very creditable a manner.'

In inserting paragraphs capriciously omitted, the present editor has acted judiciously; but it is impossible to commend his notes. They are very numerous; for the editor seems to concur in their admiration of that brilliant discovery 'marginal writing,' with the translators, who lament that Plutarch was not acquainted with the modern practice of self-annotation, and do not hesitate to assert that he would have used it himself very freely.

'Such are the liberties which we have taken with Plutarch; and the learned, we flatter ourselves, will not think them too great. Yet there is one more, which, if we could have presumed upon it, would have made his book infinitely more uniform and agreeable.

We often wished to throw out of the text into the notes those tedious and digressive comments which spoil the beauty and order of his narrative, mortifying the expectation (frequently when it is most essentially interested), and destroy the natural influence of his story, by turning the attention into a different channel. What, for instance, can be more irksome and impertinent, than a long dissertation on a point of natural philosophy starting up at the very crisis of some important action? Every reader of Plutarch must have felt the pain of these unseasonable digressions; but we could not, upon our own pleasure or authority, remove them.'

We must confess, notwithstanding that we entertain serious doubts whether Plutarch, or any other Greek, would have tolerated the monstrous absurdity of an author writing a commentary upon his own work, and explaining his own meaning by the assistance of his own annotations: if the note consist only of what is superfluous, he would have said omit it altogether, if the text be sufficiently clear, it is unnecessary; if it be requisite to illustrate it, why, he would ask, do you write so obscurely as to render illustration indispensable?—amend the text, make it sufficiently perspicuous without extrinsic assistance. Leave annotation to posterity; it will be time enough five centuries hence, when language and manners are changed, to compose explanatory notes upon your writings, for if they are not intelligible now, when will they be so? But, to return to the editor's notes upon Plutarch,—upon that work which Suidas has called *καλλίσην καὶ τοῖς ἀνδρῶντις λυσιτελεσάτνην ισορίαν*,—let us see what beauty or profit they afford. A slight examination of these notes would show that they consist of a few hackneyed quotations in Greek and Latin, but chiefly in the latter language, and from Horace; of some familiar scraps of English poetry, much fulsome flattery, and a large supply of oh's and ah's, with a frequent use of the word, alas!

It would be a long and tedious task to prove that nearly everything of value in the editor's notes is borrowed from the notes of Dacier and Ricard; those who are curious on this point may easily satisfy themselves by comparing the annotations upon one of the fifty lives, with the corresponding portion of the French translations and commentaries; even when he ventures no further than to tell us the modern and well-known name of some ancient well-known place, we shall certainly find the same information in Ricard's edition. We will rather speak of the original matter, and we will give some examples of the notes without any comment. 'Mellaria. *hod.* Tariffa, between Trafalgar and Gibraltar, in the mouth of the straits. Cape Spartel and Trafalgar, Abyla and Gibraltar, are places well known to seamen who sail into

the Mediterranean. To what seamen, to what landsmen, we may now proudly ask, will Trafalgar henceforward be unknown ?' Coriolanus is presented with a civic crown, whereupon we are informed, ' It does not anywhere appear that the ancients made use of the oak in ship-building : how much nobler an encomium might an English historian afford that tree, than Plutarch could give it; particularly since those memorable days, which have bestowed immortality upon the names of Howe, and Duncan, and St. Vincent, and NELSON !' When the Greenwich pensioners shall read Plutarch, this note will doubtless delight them. The following also is calculated for the meridian of Greenwich ; to illustrate the comparison of Pericles and Fabius Maximus, we find these words at the bottom of the page : ' At the moment in which I write this, a French fleet of twenty-two sail of the line, with twelve thousand troops on board, is flying before half the number of ships of the British navy, under the command of a Nelson ! Flying, I add, with prophetic but fruitless dismay from the fate which awaited them off THE IMMORTAL CAPE TRAFALGAR ! ' Such gasconades are totally unworthy of a scholar, and entirely useless in the way of illustration.

Some donation being mentioned in the Life of Aristides, the editor exclaims—

' A most honourable proof of their perseverance in the practice of an eminent public virtue ! The English likewise, not to mention innumerable and most liberal pensions paid on account of public service, have their *Herculeus Lar* at Blenheim, and will probably soon have an equally magnificent and equally merited Trafalgar.'

We will add one sample only of this method of explaining an ancient writer. It is stated in the Life of Julius Cæsar, that ' the Britons suffered more than the Romans gained ; for there was nothing worth taking from a people who were so poor, and lived in so much wretchedness.' The editor has subjoined this note :—

' It is amusing to an Englishman (*toto diviris orbe*, as he may still be pronounced, from his political independence, no less than his fortunate insularity) to read such passages as these, amidst the opulence and comforts flowing from modern improvements in the agriculture, and the extraordinary extensions of the commerce of his native island,—not to mention that proud spirit of patriotism, which sets invasion at defiance, and those pure flowers of Protestantism, which were sublimed out of the defiled crucible of the Romish church ! What is Plutarch's Chæronea ? What is Cæsar's Rome herself compared with still increasing London ? '

Marcellus, by carrying home the statues and paintings from Syracuse, unhappily and unintentionally gave occasion

to the following note :—‘Upon this Livy (xxv. 40) piously moralizes, and Polybius appropriates an excellent chapter (ix. 10) to the inquiry “whether the Romans did well in transmitting home the ornaments of conquered cities?” A little of the morality of these writers might have been circulated in the French armies, with no disadvantage to unhappy Italy.’ The authorities are borrowed from Dacier; had he consulted them, he would have found that it is not a question of morality, of justice to the conquered, with Polybius, but of expediency, since such spoils introduce luxury and provoke envy.

The editor is fond of finding parallels in Scripture to events in profane history; his professional studies ought to have qualified him for affording such illustration, but he is not less unhappy here than in the other regions of knowledge. For example; respecting Aratus, who was poisoned by his friend, King Philip, Plutarch writes,—

‘He was not ignorant of the cause of his disorder; but, knowing that it availed nothing to discover it to the world, he bore it quietly and in silence, as if it had been an ordinary distemper. When one of his friends, indeed, came to visit him in his chamber, and expressed his surprise at seeing him spit blood, he said, “Such, Cephalon, are the fruits of royal friendship.”’

The editor subjoins, ‘Juvenal knew the *miseræ magnæque pallor amicitiæ*; and David appears to have formed nearly a similar estimate of the stability of princely regard, Psalm cxlvi. 2.’ In the passage referred to, David, himself a prince, forms no such estimate; ‘O put not your trust in princes, nor in any child of man, for there is no help in them:’ trust not princes, nor any other man whatever, he says, not because they are unstable in their regards, but because they are mortal. He gives this reason in the next verse; ‘For when the breath of man goeth forth he shall turn again to his earth, and then all his thoughts perish:’ and the moral of the whole psalm is, trust Him only who never dies. The other references to Holy Writ are commonly not less irrelevant, so that the attentive reader wonders how such a careless habit of mind could possibly be engendered. It is an unpleasant and an unprofitable office, however, to heap up instances. The Langhorne and Wrangham have much *slipslop* in common; they call the Latin version the ‘*scholiast's* Latin;’ they tell us that ‘the schoolmen,’ i. e. Ramus, Aquinas, and Occam, ‘despise Plutarch's Greek;’ instead of the diffuseness of advocates they write ‘the *diffusion* of advocates,’ without meaning to allude to those learned persons being scattered over the country on

the circuits. They speak of asterisms without understanding the meaning of the word ; ‘ the additions are designated by an asterism,’ says the editor, respecting his notes. An asterisk is a small star, but an asterism is a constellation, a set of stars ; to constitute which not one star, but three luminaries at least would be required.

It would be easy to extend the proof by numerous instances, but we are satisfied that we have shown plainly already, how much the minds of the persons of whom we have spoken fall below that standard of ability which the least fastidious critics ought to adopt in estimating the pretensions of candidates for the important trust of interpreting that invaluable volume, which is the most worthy to be saved in a general wreck of profane literature. The Langhorns were unfit for the office which they presumptuously undertook and imperfectly executed ; and the editor has not in any way compensated for this by his annotations.

To enable our readers to comprehend with accuracy the present condition of the interpretation of Plutarch, it would be necessary to furnish them with copious extracts from various versions, but this our limits will not permit ; we have given, notwithstanding, one short passage from the life of Themistocles : by carefully comparing the different translations of this passage with each other and with the original, it will be easy to estimate what has already been accomplished, and how much still remains to be done. The Greek text stands thus in the first Greek edition, which Philip Junta published in 1517, and Reiske has not changed it in any respect,—

Ἐτέρε δέ τιος τῶν σρατηγῶν, ὡς ἔδοξε τι χρήσιμον διαπεπχῆται τῇ πόλει, Θρασυνομένη πρὸς τὸν Θεμισοκλέα, καὶ τὰς ἑαυτῆς ταῖς ἐκείνη πράξεσιν ἀντιπαραβάλλοντος, ἐφη τῇ ἑορτῇ τὴν ὑσέραν ἐρίσαι, λέγουσαν, ὡς ἐκείνη μὲν ἀσχολιάν τε μεσὴν καὶ κοπάδην ἔσιν, ἐν ἀυτῇ δὲ πάντες ἀπολαύσοι τῶν παρεσκευασμένων σχολάζοντες· τὴν δὲ ἑορτὴν πρὸς ταῦτ' εἰπεῖν· Ἀληθῆ λέγεις· ἀλλ' ἐμῷ μὴ γενομένης, σὺ ἢν ἂν ἥσθα· καὶ μὲ τοίνυν, ἐφη, τότε μὴ γενομένης, πᾶς ἢν ἥτε νῦν μεῖς;

In the *editio princeps*, of 1470, we read,—

‘Alio quodam ex ducibus : quod aliquod in remp. beneficij contulisse videretur : elato et pro Themistocle se efferente : quod suas cum Themistoclis rebus gestis conferendas esse diceret : respondit : operosum postridie diem cum festo aliquando certasse : dicentes se negotiis ac laboribus permaximis referctum esse : in illo autem paratis rebus omnes per oculum fruerentur. Ad hæc festum respondisse : vera loqueris : sed nisi ego fuissem : tu nunquam extitisses. Ita si tum ipse a vobis abfuissem : ubi nunc vos omnes essetis?’

In the year 1482, Jaconello wrote thus:—

‘Et essendo uno fra li altri capitanei: il quale per havere facto in la repubblica qualche beneficio con superbia se avantava: dicendo chelli suoi facti erano simili ad quilli de Themistocle: Themistocle respuose che adli di passati: el di operoso et di fatica era venuto in contesa col di della festa: dicendo el di operoso che lui era pieno de affanni et de fatiche: Ma che in la festa tucti per otio et ad piacere usavano le cose che prima nel di operoso erano guadagnate: ad la qual cosa rispose el di da feste Tu dici el vero: ma se io non fosse stato: tu non sarristi: et cosei Themistocle reducendo al proposito disse: se io fosse stato absente da voi: voi tucti insieme in qual parte sarrete.’

Domenichi, with more elegance and spirit, gives the passage thus in the *Collana*, A.D. 1560:—

‘Essendo un certo capitano molto insuperbito, perchè gli pareva d'haver fatto alcun beneficio alla repubica, et perciò si vantava d'esser da molto piu che Themistocle, perchè diceva, che le proue ch' egli avea fatte, non erano da paragonare con quelle di Themistocle: rispose: il giorno di lavoro venne gia a quistione col di di Festa, dicendo com' egli era pieno di grandissimi negotij et fatiche; ma che il di di Festa s'atendeva a godere in riposo le cose, ch'erano state apparecciate. Dove il di di Festa gli rispose: tu di il vero, ma s'io non era io, tu non saresti mai stato. Et così dico io hora a te, s'io non fossi stato allhora con esso voi, dove sareste hora tutti voi.’

The excellent Amyot renders it in these words:—

‘Une autre fois, comme l'un des autres capitaines de la ville, pour avoir fait quelque bon service à la chose publique, s'en glorifiast devant Themistocles, et comparast ses gests à ceux qu'il avoit faicts: Themistocles pour response luy feit un compte. Que le lendemain de la feste tensa un jour avec elle, en luy reprochant qu'il ne faisoit que travailler et avoit toute la peine, là où elle ne faisoit rien que despender et faire bonne chère de ce que les autres avoient gaigné: Tu dis la verité, luy respondit la feste, mais si je n'eusse été devant toy, tu ne fusses pas maintenant: Aussi si je n'eusse été alors, vous autres où seriez vous à ceste heure?’

Sir Thomas North does Amyot out of French in this wise:—

‘Another time one of the captains of the citie, having done good service unto the commonweale, made boast before Themistocles and compared his services equal with his. Themistocles to answer him told him a pretie tale; that the working day brauled on a time with the holyday repining against her, that he laboured for his living continually, and how she did nothing but fill her belly and spend that they had gotten. Thou hast reason, said the holyday, but if I had not bene before thee, thou haddest not bene here now; and so if I had not bene then, where had you, my maisters, bene now?’

Dryden's translator, Dr. Edward Brown, gives the apologue in this form :—

' A commander of the army who thought he had performed considerable service for the Athenians, boasting, and comparing his actions with those of Themistocles, he told him that the Day after the Festival reproached the Festival ; that upon her day those who were laborious and industrious refreshed themselves, but upon the Festival the slatternly and luxurious enjoyed all things : to which the Festival replied, It is true ; yet if I had not been before you, you had not been at all ; so if Themistocles had not been before you, where had you been now ? '

This is Dacier's version in 1721 :—

' Un autre capitaine, qui pensoit avoir rendu quelque grand service à la Republique, s'en glorifioit auprès de Themistocle, jusqu'à oser comparer ses actions avec les exploits de ce grand homme ; Themistocle luy conta cette fable : Un jour Dame Feste, et son voisin Lendemain eurent querelle ensemble ; Lendemain se plaignoit qu'il n'avoit pas le moindre loisir, et qu'il estoit toujours accablé de travail et de peine, au lieu que Dame Feste ne faisoit jamais rien, et desbauchoit tout le monde, qui dès qu'elle paroissoit, ne pensoit qu'à se divertir et à joüir de ce qu'il avoit amassé. Feste luy respondit, cela est vray ; mais tout ce que j'ay à te dire, c'est que si je n'avois été, tu ne serois pas : tout de mesme, adjousta-t-il, si je n'avois été, ou en seriez-vous à cette heure ? '

' Another officer,' the Langhorns write, ' who thought he had done the state some service, setting himself up against Themistocles and venturing to compare their exploits, he answered him with this fable : There once happened a dispute between the Feast-day and the Day-after-the-feast. Said the Day-after-the-feast, " I am full of bustle and trouble ; whereas, with you, folks enjoy at their ease everything ready provided." " You say right," replied the Feast-day ; " but if I had not been before you, you would not have been at all. So, had it not been for me then, where would you have been now ? "

Ricard, in 1799, translated thus :—

' Le jour de fête, lui dit Thémistocle, eut dispute avec son lendemain ; celui-ci se plaignoit qu'il n'avoit pas un moment de loisir, et qu'il étoit accablé de travail ; tandis que le jour de fête n'avoit d'autre soin que de faire jouir tout le monde à son aise des biens qu'on avoit amassés les autres jours. Tu as raison, répondit le jour de fête ; mais si je n'avois pas été, tu ne serois pas. Moi aussi, ajouta Thémistocle, si je n'avois pas été, où seriez-vous maintenant ? '

We see here a succession of translators, all of whom have taken the passage from some old Latin version, that was the production of a person who disregarded the pronouns ἐκεῖνος and ἀυτὸς, or was possessed of a text different from any that is now in existence : they have all altered and injured the

meaning, in contempt of the proverb, ‘the day after the feast,’ which is synonymous with quiet, easy enjoyment. Dryden’s translator, it is true, has paid attention to the persons designated by the pronouns, and has given the parable a new, humane, and popular sense : we may suppose, that he, or some previous interpreter, had read, instead of ἀσχολῶν τε μεσὴ καὶ κοπάδης, ἀκολάσων τε μεσὴ καὶ κομπάδης, ‘full of licentious persons and ostentations,’ and that he considered the σχολαζόντες as a class of men, who were usually laborious, but were allowed to rest on that occasion, and, by way of largess, to enjoy the relics of the feast. This interpretation, however, were it authorized by ancient MSS., would not convey the reproof of Themistocles so well as the received text :—‘The Day-after-the-feast disputed with the Feast-day, and said, “that that day is always full of bustle and wearisome, but on her own day all persons enjoy at their ease whatever has been previously prepared.” The Feast-day answered to this : “What you say is true ; but if I had not been, you could not be.”—Yours is a day of fatigue, said the Day-after-the-feast ; mine of enjoyment.’

We would endeavour, if we had not already somewhat transgressed the bounds we had set to this subject, to express in part, and to communicate at least a portion of, the earnest desire we feel to possess at last an adequate translation of Plutarch’s Lives ;—a translation that should do justice to the forcible and effective, and (if it be a beauty to strike his meaning into the very heart of the reader, and to leave it there for ever) the beautiful style of the author ; and that should completely unfold his full and deep sense in language agreeable and artless, and so plain, that it should be intelligible to the young in age, and to those who are always young in intellect, as far as it respects literature—the more humble classes of society. We sincerely and passionately desire such a possession, not because the golden volume is a treasury of ancient wisdom—not because it presents a vivid picture of ages—that, on account of the frequent exercise of many splendid virtues, we may justly deem heroic ; but because the ever estimable Chæronean, above any other writer—we had almost said above all writers—unceasingly, and with unequalled efficacy, asserts the paramount importance of education, and the eternal, immutable necessity of sound morality. We lament to add, that we can hardly venture to expect that this precious addition to the materials of instruction will soon be made ; those, whom fortune has endowed with a complete independence, rarely possess the requisite industry and learning : if a competent translator should ever be found amongst men of letters, it would be impossible

for the booksellers to afford an adequate remuneration for the application of uncommon talents to a single object for a long period of time. Plutarch enjoyed a moderate patrimony, the profits of a lay priesthood, and the lucrative offices which the friendship of a wise prince had conferred upon his favourite; and he was thus enabled to devote himself to the composition of his immortal work. Amyot, the best, because the most spirited and popular of his translators, was an ecclesiastic, amply provided with the leisure and all the aids that could cherish a studious mind; his literary labours were rewarded by many splendid benefices, and he died enormously rich. Sir Thomas North enumerates on his title-page some of the stations and honours of the excellent interpreter, 'James Amyot, Abbot of Bellozane, Bishop of Auxerre, one of the King's Privie Counsell, and Great Amner of France.'

#### ON THE COMMERCE OF PALMYRA.

THE paper read by Professor Heeren at the public meeting of the Royal Society of Göttingen on the 20th of November last, had for its object the Commerce of Palmyra, and was entitled 'Commercia urbis Palmyrae, vicinarumque urbium ex monumentis et inscriptionibus illustrata.' The author felt an additional incitement to continue his researches on this subject, particularly from the encouragement which an extract of his former treatise on the ancient commerce of Ceylon (vide N. 28 Göttingsche Anzeigen 1828) has received from the Royal Asiatic Society of London, who expressed to him, through their Vice-President Sir Alexander Johnstone, late Chief-Justice of Ceylon, their kind sense of his labours, offering him at the same time their aid in facilitating future historical inquiries throughout the British dominions in Asia; of which kind offer the author has already availed himself. It is part of the plan of this Journal to direct attention to investigations such as this paper contains, for the purpose of rousing our countrymen to apply their knowledge and labour to similar pursuits.

The essay before us treats of the commerce of a city whose ruins still manifest her former greatness, and whose commerce extended as far as India. The author prefaced his treatise by a short history of Palmyra. Founded by Solomon, we find her first mentioned as a city of great importance with regard to commerce in the time of Augustus-Cæsar; Appian (De Bellis Civilibus, v. 9.), telling us that Antonius had promised his cavalry to sack the town, in which attempt

she however did not succeed, the inhabitants having previously removed all their treasures. But it was during the three first centuries of the Christian era, under the Roman dominion, that she reached the zenith of her prosperity. Pliny (v. 25,) mentions the city as a place of great importance : her greatness and power became however still more conspicuous under the reigns of the Hadrians and Antonines, when the empire was at peace with the Parthians. It was then that the arts (chiefly architecture)\* and commerce, those off-springs of peace were particularly flourishing in Palmyra, rendering her great and powerful as her monuments display ; for, notwithstanding her having become included in the Roman dominion, she still remained in possession of her free constitution, as is testified to us by the inscriptions ordered by the senate and people, to whose government an imperial procurator was joined in the latter period. During the reign of Trajan, the city suffered probably very much either from war or earthquakes, or from both causes together. This we conclude from the fact that Hadrian is called her restorer. The inscriptions likewise inform us that Hadrian himself and his successors, Alexander Severus and Gordian, visited the town, and were received with great pomp and splendour. Her misfortunes under Queen Zenobia, and her destruction by Aurelian, are well known.

The remaining monuments of Palmyra all belong to the class of public edifices, † such as temples, palaces, colonnades. Amongst these, the temple of Helios, Bel or Baal, stands foremost in rank. This temple stood in the middle of a square or aula ; the aula itself was surrounded by a magnificent portico, from which a colonnade of 4000 feet in length, with a triumphal arch, led to the other great edifices. It was in the aula and in the long colonnade, but not in the interior of the temple, that the monuments were placed, the inscriptions of which we are about to explain, and which prove that in Palmyra, as elsewhere in ancient times, commerce stood in close relation to religion. These monuments appear also to have formed a separate division or part of the town. No trace of any private houses has as yet been discovered amongst them. These were found

\* See the Chronicle of John Malala, who gave a detailed description of the monuments erected to the Roman emperors in Syria.—Lib. X., &c.

† These monuments were first made known to the world in the year 1691, through English merchants, who brought some inscriptions to Europe, which Seller, in his History of Palmyra, undertook to explain. The chief work, however, is Rob. Wood's *Ruins of Palmyra*, published in 1753, which is the result of his own travels and researches, and contains the inscriptions themselves. The '*Voyage pittoresque en Syrie*' by Mr. Cassas, contains nothing but engravings, with an 'explication provisoire,' but none of the inscriptions.

at some distance by English travellers, and appear to have occupied a wide extent of ground.

The researches of the author on the commerce of Palmyra comprehend three distinct parts, viz., the objects of her commerce, its nature, and the roads or channels by which it was conducted. As to the objects or articles of commerce, they were probably both foreign and domestic produce. Owing to her geographical position in the centre of the Syrian desert, she had to offer no other produce of her own but dates and salt, which latter article this part of the desert supplies even at the present day to the towns of Syria, and such was probably the case in former times. It may, however, be asserted with little hesitation, that this branch of trade was comparatively insignificant in proportion to her foreign commerce. 'The inhabitants of Palmyra,' says Appian (v. 9.), 'are merchants who receive the produce of India and Arabia from the Persians (the Parthians), and carry them into the Roman provinces.' The produce of Arabia consisted chiefly of incense and myrrh, that of India of spices, pearls, precious stones, and manufactures, among which those of pure silk (*holosericeae*), were particularly considered as a very valuable article in Palmyra, from whence they were sent, according to Flavius Vopiscus, (Life of Aurelian,) as a most costly object of luxury, to Rome. We have, besides, the authority of the *Periplus of the Erythrean Sea* to show the variety of goods which India then produced.

The nature of the commerce of Palmyra was influenced by her local situation. The town being built in the centre of the desert, between two and three days' journey from the Euphrates, and from five to six days from Damascus, her trade could be conducted in no other way but by caravans, which were in fact the only channel of commercial intercourse in those regions, as they are at the present day. Palmyra must, besides, have had an abundance of camels, the breeding of that animal having been from the earliest period of history the chief occupation of the neighbouring Arab tribes, particularly in the district of Nedsched. The Palmyrenes were therefore chiefly the conductors of the caravans, and became afterwards merchants themselves, acquiring from their own commerce the great wealth of which Pliny and others tell us. According to Flavius Vopiscus, the number of camels belonging to Palmyra must have been immense. When Zenobia could no longer maintain herself in the town, she attempted her escape on dromedaries, but was overtaken by the cavalry of Aurelian. This at once proves that she possessed a regular stud of camels. It is also generally known how much

danger and insecurity the commerce in those regions had to contend with, owing to the pillaging habits of the roving Bedouin tribes. ‘It is curious,’ says Pliny, ‘that these tribes should be robbers and traders at the same time.’ Travellers were then, as is still the case, under the necessity either of purchasing a safe conduct from them, or of being accompanied by numerous armed men; both expedients were expensive. At Palmyra, it was the town herself that had to provide for the safety of her merchants during their journey through the deserts. But sometimes those expenses were defrayed by private persons, such as magistrates, or the directors of the caravans, from their own private property, and the grateful city erected to them for such acts of patriotism, monuments or statues, with inscriptions, in public places, either in the aula of the temple of Helios, or in the long colonnades. To these testimonials of public gratitude we are indebted for some further discoveries relating to the nature of the commerce of Palmyra. The inscriptions copied in Wood’s *Ruins of Palmyra* amount to twenty-seven, thirteen of which are in Palmyrene characters, \* with a Greek translation, and fourteen in Greek only; they are engraven on the pedestals of the shafts of those columns which were erected in the aula and the long colonnades. Four inscriptions, of which three are in Greek, relate to commerce, and are those commented upon by the author. The following is the latin translation.

I. *Ruins of Palmyra*, No. XVIII., *in the Court of the Temple of the Sun*.—Senatus Populusque Palmyrenus Septimium Orodem, optimum Procuratorem Ducenarium Augusti, qui oleum curavit donandum Metropoli coloniae quique privata impensa et suo sumtu commeatum mercatoribus iter commune facientibus præbuit; et a negotiorum Præsidibus amplum testimonium adeptus est; fortiter et cum laude militantem; et ædilem ejusdem metropolios coloniae plurimas etiam opes ex privato impendentem; ideoque placentem eidem Senatui populoque; et nunc magnifice symposiarchum in sacrificiis Jovis Beli honoris erga coluit.

This Septimius Orides was a ducenarius or procurator of the Emperor, and at the same time ædile of the town (*ἀγρούμος*). Palmyra is here called Metropolis, as being the chief town of the district, and also Colonia, from her having

\* The Palmyrene inscriptions, as well as the Greek, have been explained by Eichhorn, in the *Commentationes Reg. Soc. Gott.*, vol. vi. The Palmyrenian alphabet was deciphered by Barthelemy.

enjoyed the *jus coloniarum* since the reign of Caracalla. The acts for which the name of Orodes was mentioned with such distinction were, firstly, for his having presented the town gratuitously with oil, probably for the use of the public baths, as the consumption of this article must have been very great in so populous a town. Secondly, For his having defrayed out of his own private property the expenses attending the travelling companies of the merchants (*τὰς συνοδίας τῶν εμπόρων*). This clearly refers to the passage of the caravans, and the expense required for the security of their journey. Orodes had a right to claim the expense from the town, but he preferred paying it out of his own property. Thirdly, He obtained on these grounds, and also for the courageous defence he displayed (probably at some attack on the caravans), a certificate from the heads of the merchants (*τοῖς ἀρχεμπόροις*). From this we conclude that the merchants formed a kind of corporation with elders at their head. Fourthly, He held at the same time the office of a Symposiarch at the festival of Bel or Helios, which he very probably fitted out in a splendid manner. This service in the religious rites being acknowledged, together with objects merely relating to commerce, shows the connexion which existed between commerce and religion in those times. Fifthly, For all these services, the senate and the people, as a token of public gratitude, erected a monument to him in the great aula of the temple of Helios, showing how important those services were regarded.

**II. *Ruins of Palmyra, No. X., in the long Portico.***—Julium Aurelium Zebidam, Mozimi filium Zebidæ nepotem, mercatores qui cum eo descenderunt ad Vologesiæ nundinas (*Ολογεσιάδα εμπορίαν*) elegerunt astorubaida, virum iis gratissimum cultus gratia a. 558 Seleucid. 246 of our Era.

This inscription refers again to a traffic carried on by caravans from Palmyra to Vologesia, a town of some importance near the Euphrates. Zebidas was elected their Astorubaïda (a word of Palmyrenian idiom), signifying probably a leader or captain of the caravan, which, the assertion that he made the journey *with* them, appears to confirm. But the author being, however, in doubt, whether it might not signify some honorary title conferred upon him by his companions at the end of their journey, addressed himself to his worthy colleague Professor Ewald on this subject, and obtained from him immediately the following satisfactory explanation.

'As regards the title *ἀστρούρβαϊδη*, I have no doubt of its Semitic etymology. The Arabic word *لادي* baida, the desert, is

easily discovered in the second part of the name *βαΐδα*; the first part *ἀσθωρον* may appear doubtful at first, as the Greeks write for the letters *ω* and *η* their *ᾳ* without any discrimination. If, therefore, the *ᾳ* here stands for *η*, the name would signify *protection of the desert*, *ירקָא* or *ירקָה* denoting protection, but it appears more correct to derive it from the Hebrew *רִאשׁ* a leader or captain to whom the management of affairs is entrusted, and to read *רִאשָׁה* or *רִאשָׁה*. The honorary title *astorubaida* may therefore be explained by *Præfector deserti.*

The title was conferred upon the leader of the caravan after the happy termination of the expedition; perhaps just in the same way as the imperator obtained his title from his legions. Having performed his duty with zeal and success, the caravan under his guidance acknowledged to him their thanks by an inscription, probably also by a statue. This monument was erected in the year 246 of our era, consequently in the reign of the Emperor Philippus, and twenty-seven years before the destruction of Palmyra, under Aurelian.

III. *Ruins of Palmyra, No. V., in the great Aula.*—*Nasae Allati filio Synodiarchae mercatores, qui cum eo descendebant ab Euphrate et Vologesia, honoris et gratitudinis causa hanc statuam posuerunt a. 453.* (A. Chr. 141.)

From this inscription, we learn that the statue, with the inscription on its pedestal, was erected by a caravan, in honour of their leader or synodiarchas, of the name of Nasas; 2dly, that this caravan arrived from Vologesia, near the Euphrates, in the year of Chr. 141, consequently, under the reign of Antoninus Pius; and its erection in the temple of Helios affords to us again a convincing proof of the connexion between commerce and religion.

IV. *Ruins of Palmyra, No. XIII., in the long Portico.*

The Greek translation of this inscription is mutilated, but it has been preserved entire in the Palmyrenian, and was translated by Eichhorn in the Comment. Reg. S. Gotting. vol. vi. p. 114. Though but a short one, this inscription is, however, very curious, as we learn from it that the Jews participated in the caravan trade of Palmyra in common with the other inhabitants. The following is the translation:—‘Haec est Statua Julii Aurelii Schalinalat, filii Malae, Hebraei, ducis Societatis peregrinatorum, quam in ejus honorem erexit Senatus Populusque Palmyrenus quod adduceret talem societatem (*συνοδίαν*). Gratis solebat itinera facere. A. (Seleucid.) 569.’ (258 A. Ch. under the reign of Valerian.)

Hence it appears (1.) that this statue was erected to one

Julius Schalmalat, a Jew; and that at Palmyra, which was originally a Jewish colony, the Jews not only participated in the commerce of the town, but enjoyed such consideration that even public honours were conferred upon them \*. (2.) That this was done on the ground of Schalmalat having been the leader of the caravan, dux societatis peregrinatorum (*ἀρχέμυτος*), whom he conducted to Palmyra at his own expense, without demanding any indemnification from the town. And from the expression *solebat haec itinera gratis facere*, we may conclude that he did this several times, and proved himself a benefactor of the town. (3.) That the statue with its inscription was erected to him, not by the merchants, but by the senate and people of Palmyra. It was, consequently, a sacred public monument, and proves the importance in which the regularity of this trade, and the happy arrival of the caravans, were held in Palmyra, the town proclaiming those persons benefactors of the community who did this service at their own expense, without any charge to the city. These inscriptions, then, prove, independently of the importance of the caravan trade itself, its close connexion with the religious rites ; Helios having been the tutelar deity both of the town and commerce. At the same time, an attentive examination of the locality of the constructions consecrated to that deity, leads us to infer from it another fact, which has indeed so high a degree of probability in its favour, that we cannot let it pass unnoticed, though we have not such historical evidence for it as for the other facts above mentioned.

The temple itself was built in the middle of a square, eight hundred feet in length on each side, which space is occupied at the present day by the Arabs, and covered with their huts. This square is again surrounded by a portico, behind which there were cells constructed, each side having a double row of fifty-four columns, at the shafts of which we see the pedestals with inscriptions. The only entrance was through a magnificent gate, behind which there were two basins eight feet deep (according to Cassas), with a flight of steps leading to them. This square is still called by the Arabs the Yard of the Camels, and travellers still alight there on their arrival. Is it possible it could have been designed for any other purpose in former ages ? The whole construction is perfectly similar to a large cara-

\* The triumph of Aurelian (after the destruction of the town) shows in some degree by how many different nations Palmyra was peopled, which, in fact, could not be otherwise in a great commercial town. Flavius Vopiscus, in Aureliano, c. 34, mentions Blemyes, Axomitae, Arabes Eudaimones, Indi, Bactriani, Iberi, Saraceni, Persae, and others.

vanserai; its square form, the porticos with the cells behind for the use of the travellers, the two basins with fresh water, and the extensive area (affording sufficient space for the camels and merchandise),—all denote the use for which these buildings were destined. And from the fact of the monuments with their inscriptions, placed there by the town or the caravans, as a token of gratitude to those leaders who defrayed the expense necessary to secure the safe conduct of the travellers, may we not conclude that we see here the great caravanserai of Palmyra, whose commerce found its security under the protection of the temple and the tutelar deities of the town? Probably, then, the adjoining portico, of nearly four thousand feet in length, with its magnificent gate and its inscriptions and monuments, was the meeting-place of the merchants and traders,—a sort of exchange, somewhat superior to those of Hamburg and Amsterdam. But as in historical researches we should always separate facts from conjecture, so we will proceed here. As an instance what great wealth the merchants of Palmyra had accumulated from their commerce, Firmus of Seleucia (in Syria) may be mentioned:—

‘Of his riches,’ says Flavius Vopiscus, ‘much is told. The walls of his house were covered with glass. So large was his stock of Ægyptian papyrus, that its value could, on his own assertion, support a whole army. He had very extensive commercial transactions with the Blemyes (a trading nation in Nubia) and the Saracens or Arabs; he also frequently sent vessels to India.’

That this Firmus could not be the only wealthy merchant of Palmyra is clear from the great number of magnificent buildings in the town and tombs in the environs.

We have still to trace the roads by which the commerce of Palmyra was conducted. To discover these channels of the commerce of antiquity is one of the most important objects of historical research; for they were not merely the channels of commerce, but also those of the religions, laws, and civilization of mankind. In the investigations relating to the commercial roads of Palmyra, we must look to the testimonies of Appian and Pliny, according to whose authority the merchants of Palmyra had a great share in the commerce of the East with the West, conveying the produce of Arabia and India to the Romans and Parthians. This shows that the high roads branched out in the directions of the south, east, and west. The roads to the south communicated with Arabia, and were probably the most important. Pliny, in his H. N. vi. 32 (or 28 in some edits.), fortunately has given us some key to it. He says:—

‘Nabataei oppidum includunt Petram nomine in coualle paulo minus duorum milliarium amplitudine, circumdataum montibus in-

accessis. Huc convenit utrumque *bivium*, et eorum qui ex Syria Palmyram \* petiere et eorum qui ex Gaza veniunt.'

Of the precise geographical position of the ancient Petra we are no longer in any doubt ; it is a place now called Karrak, thirteen miles (German) to the south of the Dead Sea, in Arabia Petraea. Laborde, in his recent travels, has described the spot exactly. It is formed by nature for a place of entrepôt. A narrow path leads through rocks to a plain of moderate dimensions, which is surrounded by inaccessible mountains. In this plain the ancient Petra was built, the greatness of which is still attested by its ruins. According to Diodorus, it was already, as early as the time of Alexander, the chief commercial town for the trade of Arabia. From the statement of Pliny, we learn that it was at Petra that the caravans coming from Arabia separated, some taking the road leading to the left to Gaza, others the road to the right to Palmyra. This town, then, was the market where the merchants of Palmyra found the produce of Arabia-Felix. On the other hand, we have the instance of Firmus, who participated in the sea trade to India, probably from the port of Myos Hormos, on the gulph of Arabia : this trade must have been very flourishing ; Strabo himself speaks of one hundred and twenty India trading vessels from that port. Another part of the commerce of Palmyra branched towards the east, to Seleucia and Ctesiphon on the Tigris, the capital towns of the Parthian empire, Babylon having already ceased to exist. That those towns were the chief customers of Palmyra there can be little doubt, since Pliny complains, speaking of the Parthians and Romans, that the Indo-Arabic trade absorbed all their wealth. Of the roads to those towns two of the inscriptions above-mentioned give us some interesting information ; they distinctly mention the town of Vologesia, near the Euphrates, as being the last stage of the caravans coming from Palmyra. This town was founded in the vicinity of ancient Babylon, by Vologeses I., not long before Pliny's time (as he expresses by the word 'nuper,' in his H. N. vi. 30. or 26.), for the purpose of commerce, where the great fairs for the caravans of Palmyra were to be established. Probably the road went in a straight line through the desert ; and not so far north as Amathusias, which was the case in Strabo's time ; and as Vologesia was but seven or eight miles (German) distant from Seleucia, it must have been perfectly fit for such a destination as a fair, where the merchants could provide themselves with the produce of Eastern Asia, which they carried from thence to the West. Probably, then, those trading cara-

\* Qui Syriæ Palmyram, some eds.

vans did not proceed farther east; as the direct trade of Tyre appears to have had similar boundaries within those countries where the Semitical idioms prevailed. The western roads communicated naturally with the towns and ports of Syria and Phœnicia; and as we find in this direction the temples of Helios at Emesa and Heliopolis, can we doubt that these towns, together with Damascus, for the protection of whose commerce the Romans had already taken measures ever since the time of Pompey, were actually the commercial stations on those roads?

The recent discoveries of Seetzen and Burckhardt in their travels show that the eastern parts of Palestine, the Decapolis, on the other side of the Dead Sea, likewise contained towns which had yielded to Palmyra but very little in greatness and splendour. With a surprise similar to that of the British travellers who first discovered the ruins of Palmyra, did these latter look on the ruins of Gerasa, Gadara, and Philadelphia. Those of Gerasa (Djerasch) have been described by Burckhardt: he found there temples, colonnades, one large theatre, and a smaller one. The ruins of the two other towns are said to be but little inferior. In inquiring, therefore, how these towns\* at the borders of the desert could become the seats of wealth, splendour, and luxury, it can only be explained by the same causes which made Palmyra so distinguished a place. Can we doubt that, in regard to them, the words of the prophet had been fulfilled, ‘a host of camels will cover thee; the dromedaries from Midian and Ephah†?’

The period of their prosperity, judging from the style of their architecture, was the same as that of Palmyra, namely, the age of the Antonines. A few mutilated inscriptions found there have still preserved us the names of these great rulers. They, however, stand there but as silent witnesses; and as it was the object of the author to found the present treatise only on incontestable and irrefutable evidence, he could not enter into any further investigations as regards those latter discoveries.

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#### SALLUST'S CATILINE AND JUGURTHA.

1. *The Bellum Catilinarium of Sallust, and Cicero's four Orations against Catiline; with English Notes and Introduction: together with the Bellum Jugurthinum of Sallust.* By the Rev. W. Trollope, M.A. London: Rivington, 1830.

\* These towns were the stations of the commerce of Arabia, on the road from Petra to Palmyra.  
† Isaiah, ix. 6.

2. C. Crispi Sallustii de Catilinæ Conjuratione Belloque Jugurthino Historiæ. Animadversionibus illustravit Carolus Anthon, Lit. Græc. et Lat. in Col. Coll. N. E. Prof. Adj. Novi Eboraci. Sumtibus G. et C. et H. Carvill, MDCCXXIX.

THE writings of Sallust do not afford a good text-book for a beginner, nor, indeed, do they possess very great value in any point of view. In all the higher qualities of an historian he is very deficient, and as a moralist or philosopher altogether contemptible. Still, if it be the pleasure of any schoolmaster or parent that a boy should read this author at or near the commencement of his studies, it is, of course, desirable to have a correct edition adapted to the purposes of instruction. Such an edition it seems to have been Mr. Trollope's intention to publish; and he has done well in adding to the Catiline and Jugurtha of Sallust the four Catilinarian orations of Cicero. We have also before us an American edition of the historian, likewise published for the use of schools. Why both these editors should have omitted the fragments of Sallust we can see no good reason: they would have required only a few additional pages, and some of the fragments are more valuable as historical documents than any equal portions of the two treatises they have published.

We believe we shall be able to give the reader a correct notion of the nature and value of Mr. Trollope's edition without trespassing largely on his time. In the introduction we find 'an elementary praxis, which may serve as a guide in the essential exercise of parsing.' The passage selected for analysis is the first part of the fifth section,—Lucius Catilina, natus nobili genere fuit, &c.; and the praxis commences thus:—

'Lucius (2 decl.) Catilina (1 decl.) pr. n. Nominative case to the verb fuit.—Natus, part. perf. of vb. dep. 3. conj. nascor nasceris, or ere, natus sum, &c. [Rule, Verba in or, &c.] Nom. sing. masc. to agree with Catilina. [Rule, Adjectiva, participia, &c.]—Genere, noun subst. 3. decl. from genus, eris. [Rule, Est neutrale, &c.] Abl. sing. governed by natus. [Rule, Natus, prognatus, &c.]—Fuit, verb. subst. from Sum es fui, &c. [Rule, Sum, fui, habet.] and so on for four pages of precisely the same character. This praxis, we are given to understand, will be decisive in its effects upon the pupil's intellect, and he is accordingly dismissed, as follows:—

'Here, then, we may leave the scholar to work for himself; and, trusting that he will find no great difficulty with the occasional assistance afforded in the notes, let him be advised to make out every word with diligence and accuracy.'

To the uninitiated the mystical symbols of Mr. Trollope may appear somewhat obscure; and we had, therefore, intended to give a specimen of an English praxis, taking the sentence we have just quoted for the subject of our analysis. We had proceeded as far as the word 'trusting;' thus:— 'trusting, part. pres. vb. act. to trust, I trust, you trust, or thou trustest, &c. agrees with *we* understood. [Rule, adjectives, participles, &c.] *We*, pron. pl. nom. from *I*, &c. But when we came to apply the Rule 'Verb, personal,' &c. we were at a stand-still, not being able to find the verb to which the pronoun refers. We regret this the more, as an engine so effectual for the explanation of the Latin language must, of course, afford great assistance towards an accurate knowledge of our own.

Like nearly all our English editors of Greek and Latin books for schools, Mr. Trollope seems wholly indifferent about the correctness of his text; and, in the case of Sallust, this is the less excusable, as Cortius has, in his edition, carefully reported the readings of the various MSS. Had he but copied the text of Cortius, without examining his authorities, we should have had no cause to complain; but, unfortunately, a certain text has established itself in the school-books of this country, without much regard to authority; and to the orthodox errors of this Anglican text Mr. Trollope persists in adhering. The first word of the Catilinarian war is an unimportant specimen of this inattention. Cortius tells us that all the best manuscripts have *omnis*; but such evidence has no weight with our editor, when he finds in the Eton Grammar that *omnes* is the form of the accusative plural. Again, at the end of the first chapter, '*Ita utrumque, per se indigens, alterum alterius auxilio veget*' is the reading given by Mr. Trollope, with the following note:—'Although the word (*veget*) is very rare, there is no necessity for altering it into *eget*, as some have proposed. In that case *auxilio* would be the governed ablative. [Rule, *fugor*, *fruor*, &c.] It is now the ablative of the cause.' The reader would naturally infer from this that the manuscript reading is *veget*, and that *eget* is a conjectural alteration. The fact, however, is precisely the reverse, as appears in the note of Cortius. '*Gruteri, Rivii, Wassii, nostrorum et forsitan omnium qui ubique dantur MSS. haec (eget) est lectio, quam primus Palmerius immutavit veget loco eget substituendo.*'

In reference to the notes we will first observe that a considerable number of them are of the same nature as the praxis in the introduction; thus, in the second page alone, we find— 'Rule: *Fugor, fruor*, &c. 'Rule: *Verba infiniti modi*', &c.

'Rule : Verba imperandi,' &c. Equally valuable, and almost equally common, is the employment of the terms Hendiadys, Tmesis, Paraphrasis, Ellipsis, Hypallage, Latinism. In the third place we are indebted to Mr. Trollope for a number of parallel, or what are intended to be parallel, phrases and sentiments from Terence, Milton, Apuleius, Ammianus Marcellinus, Tacitus, Seneca, Statius, &c.

The historical and geographical articles consist almost entirely of simple references to Lempriere. Thus :—Cato, see Lempriere ; Scipio, see Lempriere ; Carthago, see Lempriere ; Fabia Terentia, see Lempriere.

As we have already stated pretty openly our opinion of this work, we need only refer the reader to our second number ; and it happens fortunately that Cato and Scipio were two of the very names particularly examined. Besides, little advantage is derived from a reference to Lempriere, when the very article to which we are referred is scarcely of greater extent than the words necessary to express the reference. Mr. Trollope, for instance, gives us a note on Fabia Terentia, directing his reader to consult Lempriere. Now, the article in the Dictionary, when found, contains just one single line. Mr. Trollope would not have been charged with plagiarism had he copied the eight words which constitute the biographical notice in the Dictionary, while his reader would have been a gainer in both time and paper.

The few historical notes of his own with which Mr. Trollope has favoured us are, indeed, worthy of Lempriere. By way of adding, we suppose, to the scenic effect of the fourth oration against Catiline, he gratuitously supposes that Terentia, with her son and daughter, were present 'to ascertain the course which the proceedings in which they were so nearly interested were likely to take.' Is Mr. Trollope aware that the little Marcus was at this period only one or two years of age ? We have said that he *gratuitously* introduces them into the senate ; but he does so not only without, but against evidence. To prove this we need go no further than the very passage to which he appends the note in question,—  
*'Nec tamen ego sum ille ferreus, qui fratri carissimi atque amantissimi praesentis mœrore non movear, horumque omnium lacrimis, a quibus me circumsessum videtis: neque meam mentem non domum saepe revocat exanimata uxor, abjecta metu filia, et parvulus filius.'*

In page 5 there is an historical note on the *Aborigines*, which we cannot refrain from quoting in part. It will speak for itself—'According to Cic. Tusc. Quaest. 1., the old poet Ennius calls them Casci, a name which is thus explained by

Servius in his commentary on Virgil: *Latium* dicitur, quod ibi *latuerint* incolae; qui quoniam in cavis et occultis montium *caventes* sibi a feris belluis habitaverint *Casci* vocati sunt,' &c.

As a specimen of the notes connected with Roman customs we extract the following:—‘The Romans had a greater and less coin, called *sestertium* and *sestertius*, the former of which contained 100 of the latter, and was equal to about 7*l. 16s. 3d.* of our money.’ And, again, ‘The *sestertius* was a quarter of a denarius ( $7\frac{1}{2}d.$ ), equal in value to two pounds and a half of brass.’

If a second edition of this work ever be called for, we request the editor to favour us with his authority for the following points:—First, that the *sestertium* (value *about 7l. 16s. and threepence*) was a coin; secondly, that a *hundred\** *sestertii* were equivalent to a *sestertium*; thirdly, that a *sestertius* was worth a fourth part of  $7\frac{1}{2}d.$ , and yet of equal value with two pounds and a half of brass.

In page 37 we are informed that *liberti* means ‘freedmen, as distinguished from the *ingenui*, or free-born citizens of Rome;’ and that ‘their sons were called *libertini*.’ Now, the American editor assures us that *libertus* is the correlative of *patronus*, and that *libertini* is opposed to *ingenui*; that Tiro, for instance, belonged to the class of *libertini*, being the *libertus* of Cicero. Mr. Trollope, on further inquiry, will find reason to agree with Mr. Anthon.

A few remarks on those notes which are explanatory of construction, and we have done. In page 82 (and by the time the pupil arrives at this stage of the work, be it observed, he will have read the whole of the Catiline and more than two of the orations of Cicero) there is given this note:—‘*Negavi me esse facturum.* . . . . The infinitive mood is used after an accusative case, the conjunction *that* being understood in the English. [Rule: *Verba infiniti modi, &c.*]’ Had any note upon this usage of the Latin accusative been necessary, it would have been more judicious to have placed it at the outset of the Catiline, after the words *qui sese student praestare*. Yet Mr. Trollope, omitting it in this first passage, takes care to lose no opportunity of giving the same valuable note in the middle of his book. See p. 15, n. 1; p. 20, n. 3; p. 21, n. 5; p. 30, n. 3; p. 31, n. 2; p. 33, n. 4, &c. This, however, is merely a waste of paper. There are too many notes where the pupil is likely to be misled by the critical remarks of our editor. Thus in the seventh chapter of the

\* ‘A hundred’ appears to be a mistake of the press, but as the whole passage is so inexact, it seemed necessary to extract it entire. Typographical errors in Mr. Trollope’s book are very numerous.

Catiline, the construction—‘Eas divitias, eam bonam famam magnamque nobilitatem putabant,’ we are told, may be thus supplied, ‘eas *res* esse divitias, eam famam esse bonam famam, &c.’ This is one instance among many of a common practice with a certain class of grammarians. If they meet with a feminine adjective which presents to them any difficulty, they can always evade the difficulty by supposing *res* to be understood. If the adjective be in the neuter, it is equally easy to supply *negotium*. With the masculine the case is otherwise. They are then wholly at a loss. As to the passage here in question, the construction in respect of gender corresponds to the *Hoc opus, hic labor est*, or the *Is locus urbis erit; requies ea certa laborum* of Virgil. See also Zumpt’s Grammar, § 66. 7, and Livy: *Sempronio datae legiones duae (ea quaterna milia erant peditum)*.

Again, in the 5th chapter of Cicero’s second oration, ‘Sed si, omissis his rebus omnibus quibus nos suppeditamus, eget ille—senatu—equitibus Romanis—populo—urbe—ærario ; si, inquam, his rebus omissis, ipsas causas contendere velimus, &c.’ Mr. Trollope gives this comment: ‘*Omnibus*—this adjective does not agree with *rebus*, but is the ablative after *eget*, and *senatu, equitibus, populo, &c.*, are in apposition with it [Rules: *Fungor, fruor, &c. Duo substantiva, &c.*]’. That which has here misled Mr. Trollope, has often misled other editors, and has indeed frequently led to the corruption of a text. We have an example in Liv. xxiv. 2, where there can be little doubt that the true reading is ‘quum Bruttios obpugnare, Poenos nec probare nec juvare eam obpugnationem appareret.’ It is indeed almost always the practice of Livy, when contrasting the conduct, feeling, or situation of two parties, to omit the conjunction, which perhaps is sometimes required in the English translation. Thus the present passage might be rendered: ‘If, putting out of our consideration all those resources in which *we* abound, *while he* is altogether deficient, &c.’ Other instances of constructions misunderstood by our editor may be found in Cat. c. 31, n. 4; c. 30, n. 6; c. 43, n. 5, &c.

We have already mentioned one instance of a practice pretty common in these notes, we mean the explanation of grammatical idioms, by the supposition that certain words are understood. This principle plays a very important part in Mr. Trollope’s *praxis*. For example, c. 4, n. 2, ‘absolvam—historiam must be supplied as an accusative;’ c. 6, n. 1, ‘tentare—it is generally understood to be governed by incipiebat understood [Rule, Ponuntur interdum, &c.] . . . Perhaps the Latins *understood nothing*, but merely adopted the form as more smooth and elegant;’ c. 19, n. 6, ‘Sunt qui

ita dicunt—Quidam or alii is understood ;' c. 23, n. 5. Huic homini non minor vanitas inerat quam audacia. 'Subaud. erat [Rule : Est pro habeo, &c.] ;' c. 39, n. 1. 'Subaud. forent ;' c. 40, n. 5. Orare 'Subaud. incipiebat.' What with all this understanding and subauding, we cannot but think that Mr. Trollope's pupils are likely to fall into the same predicament as the poor Romans themselves, and at last to understand nothing.

We may now conclude our remarks on this edition ; nor indeed should we have trespassed so far on the time of our readers, but for the consideration that in disposing of Mr. Trollope's Sallust, we have saved ourselves perhaps from the necessity of examining a number of other school-books which have issued from the same source. These books may, indeed, possibly be better than the one before us. The reader, however, now knows some of Mr. Trollope's failings as an editor, and he can, by a very cursory examination of his other publications, determine how far these failings are common to them. Among the works advertised by Messrs. Rivington, there are to be found the following :—

1. *The Iliad of Homer*, chiefly from the text of Heyne, with copious English notes, &c., by the Rev. W. Trollope, M.A., late of Pembroke college, Cambridge, and one of the masters of Christ's Hospital. 2 vols. 8vo. 1*l.* 4*s.*

2. *Pentalogia Græca*, &c. Notis Anglice scriptis illustravit, &c. Gulielmus Trollope, A.M. 8vo. 14*s.*

3. *Excerpta ex Ovidio*. With English notes and an introduction, containing rules for Construing, a Parsing Praxis, &c., by the Rev. W. Trollope, M.A. 12mo.

Mr. Anthon's edition commences in rather a formidable manner, with a Latin title-page, a Latin dedication, and a Latin preface. As these were the first published specimens of American Latinity that had ever fallen under our notice, we were tempted to read them ; but the perusal has only confirmed our previous impression, that all such accompaniments to a work, so far as they are at all necessary, should be written in the vulgar tongue. In saying this, we mean no special dispraise of Mr. Anthon's Latinity. Though deficient in simplicity, though disfigured with poetical phrases, and occasional solecisms, it will not suffer from comparison with many productions in the same language which issue from the British press, sanctioned too by names high in the learned world.

Passing over, then, these exterior ornaments, we proceed to the work itself, which consists of the Catilene and the Jugurthine war, with a very large appendix of notes, the extent of which will be readily estimated, when we state that

the text occupies 132, and the notes 254, pages. And if we take into consideration the size of types, this difference will be materially increased.

The text is for the most part copied from that of Cortius, which, being almost invariably founded on the best manuscript readings, is justly deserving of value. In those passages where the American editor has ventured to differ from Cortius, though we occasionally agree with him, we think on the whole that he has been too indifferent about the support of MSS., and has attached more than the due value, to certain undefined notions of elegance and vigour of style. Thus in the first chapter Mr. Anthon agrees with Mr. Trollope in the reading *veget*, contrary, as we have already said, to every manuscript. His note is this:—‘An archaism for *viget*. . . . As Dahl well remarks *indigens eget* is a frigid expression.’ This criticism would be more valid, were the two words in the original in immediate juxtaposition.

In the 14th chapter of the Jugurthine war, towards the close of Adherbal’s speech, there is a passage where Cortius has destroyed the sense by a reading of his own, totally unsupported by authority, and in this he is followed by Mr. Anthon.

‘They tell you,’ says Adherbal, ‘that my complaints are mere fictions of my own, that I represent myself as expelled from my kingdom, when I might have reigned there undisturbed. Would that I could see the man who has been the cause of all my misfortunes playing the hypocrite as I am; yes, the sufferings of my father, my brother, and myself, would be then sufficiently avenged.’

*Utinam illum . . . eadem haec simulantem videam. Ne ille . . . gravis poenas reddat.* The reading of Cortius, in spite of every MS., and contrary to the idiom of the language, is *reddet*.

It may be here worth while to observe, that nearly all our grammarians, translators, and editors, are incorrect in the translation of the subjunctive mood, after such conjunctions as *utinam, si, quasi*. Dr. Crombie, in his *Gymnasium* (vol. i. p. 51.), and Zumpt, in his grammar (Mr. Kenrick’s translation, p. 330.), have given a pretty correct view of the difference between the Latin and English idioms. Thus to take an example from the latter: *Tu si hic sis, aliter sentias*, if you were in my situation, you would feel differently. Plautus has the same phrase in a different tense: *Tu si illuc esses, aliter sentires*, if you had been there, you would have felt differently. This distinction, simple as it is, is more than once neglected by Mr. Anthon. We have three instances in the 31st chapter, *aequo animo paterer, nisi misericordia in perniciem casura esset*, i. e., ‘Would end in your own ruin,’

says Mr. Anthon, instead of ‘would have been likely to end.’ At the beginning of the same chapter: *Multa dehortantur a vobis, Quirites, ni studium reipublicae omnia superet.* Mr. Anthon’s note is: The usage of *dehortantur* for *dehortarentur* will be found explained, &c. He should have said, for *dehortentur*. So again: *Si tam libertatis curam haberetis, &c.*; and in c. 14, *Si ad impetrandum nihil caussae haberem . . . tamen erat majestatis Romani populi.* This last Mr. Anthon translates: ‘Still it would be,’ instead of, ‘still it would have been, &c.’ Even with the indicative mood, the use of *si* is not generally understood by our modern editors. Mr. Anthon’s preface will afford an example. ‘*Si utilitatis fructum hi praebeant igitur, quibus nunc perfunctus sum laboribus, magnopere gaudebo; votis fruiturus felicissimis, si eruditorum quoque demereantur suffragia.*’ We would suggest that the two subjunctive moods might be advantageously exchanged for futures of the indicative.

But, to return to the examination of the text, we recollect two other passages, where we have always thought Cortius somewhat injudicious. In the seventieth chapter Bomilcar, writing to his fellow-conspirator, reminds him, *Jugurthae exitium adesse; ceterum, suane an virtute Metelli periret, id modo agitari.* This is the reading of Cortius, which is repeated by Mr. Anthon. But that such is the correct order of the words, we cannot believe; for certainly the common arrangement in clauses of this kind is such, that of the two opposed words one precedes *ne*, and the other follows immediately after *an*. We would contend, therefore, either that *fraude*, or some equivalent word, has disappeared after *suane*, or else that *virtute* and *Metelli* have been transposed.

The other passage is in c. 101: *ratus ex omnibus aeque aliquos ab tergo venturos.* This is the reading of the MSS. and of Cortius, who refers *aeque* to *ab tergo*, and translates it *gerade von hinten zu, directly in the rear.* Will the position of the word *aliquos* allow us to connect *aeque* with *ab tergo*? and, secondly, is there any other instance where *aeque* possesses the power here assigned to it? Mr. Anthon, with the Bipont editor, gives as the meaning: ‘*that some of them certainly, no matter which.*’ This, again, is a translation of *aeque* for which we know no authority. Gronovius’s conjecture, *utique*, would justify such a translation, and we have little doubt that his conjecture is right.

In c. 111. *Denique regi patefacit, quod polliceatur, Senatum et Populum Romanum non in gratiani habituros,* is translated ‘as regards any promises he *may* make,’ &c. It should have been, with regard to the offer just made. Sulla refers

to the specific offer of Boeckus stated in the preceding chapter, *Arma, viros, . . . sume, ulere*; and again, *Ego flumen Mulucham non egrediar neque*, &c. The subjunctive mood appears to have misled Mr. Anthon.

In c. 85, the phrase *ex animi sententia* is thus translated : *as I am well persuaded*. Cortius has shown in his note, that this expression is merely an abbreviated form of an affirmatory oath. It might be completed in this way : *Ita omnia mihi ex animi sententia eveniant ut*, followed by some indicative mood. The same phrase occurs in Livy, xxii. 53; and many other passages. See Drakenborch's note. The word *ferox*, again, is a source of some difficulty to our editor. Sometimes it is translated *unsubdued*, then *violent*, then *stern*, &c. We believe that the quality expressed by this word is a full confidence in one's own powers, a meaning which will be found to accord with the several passages we refer to, better, perhaps, than any of the three translations given above.

A large portion of Mr. Anthon's notes consists of translations of short clauses or single words, in many of which more attention seems to have been paid to a supposed elegance of language, than to the precise meaning of the original. Thus we have :

Jug. c. 4. *furtim et per latrocinia*, by private intrigue and unfair practices.

Cat. c. 52. *armis*, martial prowess.

Jug. c. 91. *coercitum*, capable of being kept in subjection.

Cat. c. 52. *cedunt*, eventuate.

Jug. c. 76. *infectum*, impracticable.

Jug. c. 72. *quieta*, given to undisturbed repose.

Cat. c. 10. *materies*, the germ.

Cat. c. 48. *animos reficeret*, might reanimate the courage.

Cat. c. 33. *nemo bonus*, no man of spirit.

Jug. c. 14. *emori*, a speedy death.

Cat. c. 20. *emori per virtutem*, bravely to encounter a speedy death.

Jug. c. 31. *summam gloriam*, the highest civil employment.

Jug. c. 15. *famosam impudentemque*, barefaced and shameless.

The following note on the fifty-second chapter of the Jugurtha is not altogether intelligible :—

'*Adverso colle*, "up the hill." *Secundo colle*, down the hill. . . . In the phrase *secundo colle*, the term *secundo* retains its primitive meaning of following from *sequor*, of which it is properly a verbal: thus, *secundo colle*, literally, the "hill following;" i. e. the descent

of the hill following after as it were, and urging us on. So *secundus ventus . . . secundo flumine, &c.*'

In the case of the wind and the stream the origin of the phrase is evident; but we confess we cannot readily form a notion of a hill running after us, at least without thinking of an avalanche in Switzerland, or some of the bogs in Ireland. Mr. Anthon will perhaps ask us for our own explanation; but we must decline giving any until we find authority for the phrase, which we do not at the present moment recollect ever to have met with.

Though Mr. Anthon's edition is, without comparison, superior to that by Mr. Trollope, still they have some defects in common. We have already pointed out Mr. Trollope's regard for certain grammatical terms borrowed from the Greek tongue: the following quotations will show that Mr. Anthon has a leaning the same way:—

Jug. 8. 41. '*Coepere nobilitas dignitatem populus libertatem in lubidinem vertere.* Note: an elegant *zeugma* operates in *lubidinem*.

C. 49. '*Ut quemque pecunia aut honore extulerat.* Note: a *zeugma* operates in *extulerat*, by which it assumes a separate meaning with both *pecunia* and *honore*. "As he had gifted (?) any one with a present of money, or distinguished him by promotion." The *zeugma*, however, may be avoided, if *extulerat* be rendered "he had distinguished." But this is less *elegant*.'

See also c. 29. *uti acciperet*, and c. 42. *multos mortalis*.

Again:

C. 14. '*Capti ab Jugurtha, pars in crucem acti, pars bestiis objecti.* Note: *capti* agreeing in gender with *adfines, amici, &c.* to which also *acti* and *objecti* refer by *synesis*.'

Similar notes are given on c. 16. *pars illa, qui, &c.*, and c. 95. *magno equitatu—quos, &c.*

A reference from one to another of these passages would have been, we think, a more useful illustration for the American student, than the apparent solution of a difficulty by calling in the assistance of certain Greek words. There are other terms of the same nature we might point out, such as *metonymy, archaisms, &c.*

The other point, wherein our two editors agree, is the practice of explaining grammatical difficulties, by understanding, or, as Mr. Trollope would express it, by *subauding* certain convenient words. Every page of the notes would furnish examples:—

Jug. c. 48. '*Humi arido, understand solo to govern humi in the genitive.*'—c. 84. '*Plerisque militiae cognitos. Militiae, sc. in tempore.*'

Or, again :—

Jug. c. 30. ‘*Apud plebem gravis invidia; patres probarentne flagitium, an decretum subverlerent, parum constabat.*’

Upon this we find the following note :—

‘Cortius places a comma after *patres*, which then becomes either the nominative absolute, or else the accusative governed by *quod ad* understood. The punctuation we have adopted is decidedly preferable. “It was uncertain whether the Senate would approve,” &c.’

The explanation, by supplying the words *quod ad*, can scarcely be called an explanation at all, seeing that *quod ad patres* is a phrase wholly inadmissible. (In c. 92. is another instance, where Mr. Anthon avails himself of the same explanation.) All, perhaps, that Cortius meant by the unfortunate comma, was this, that the reader should throw an emphasis upon the word *patres*, as opposed to *plebem*; and, after an emphatic word, a pause is always made in practice, no matter whether it be noted in our system of punctuation or not. We object also to Mr. Anthon’s translation, for the very reason that this emphasis is neglected. Had the order of the English corresponded more closely to that of the original, this defect would have been avoided; and this leads us generally to complain of the practice in our schools of transposing the words of a Latin author in translating, so as to reduce them to what is conceived to be the natural order of the English tongue. Some of our school books go even so far as to lay down certain rules for this re-arrangement. A boy is first to hook up a nominative; then, we believe, he is to bait for a verb; and so on. Now we feel assured that if the words were translated somewhat more in the order in which they present themselves, the meaning of a passage would more readily be found, and the translation would be more likely to retain the spirit of the original.

So far we have given a somewhat unfavourable view of Mr. Anthon’s Sallust. It remains to lay before the reader extracts from such of his notes (and they constitute a considerable portion) as deserve commendation. Those on geography are, almost without exception, far superior to any we meet with in our English editions.

The following is the note on Zama, Jug. c. 56 :—

‘Zama, a city of Numidia, five days’ journey west of Carthage, according to Polybius (xv. 5.). Near this place Scipio, subsequently surnamed Africanus Major, obtained a decisive victory over the Carthaginian forces under the command of Hannibal. Strabo and Hirtius speak of it as the royal residence of Juba. It was levelled to the ground by the Romans after the death of Juba,

but rebuilt in the reign of Hadrian, and by his orders. No traces of it remain at the present day, &c. &c.'

We give another note of the same nature:—

Jug. c. 21. Cirtam. ‘Cirta, now Constantina, a city of Numidia on the river Ampsagas, at a considerable distance from the coast. It appears to have been originally the only important city of the more inland parts of Numidia, and hence, probably, its name from the Punic *kartha*, “a city.” It was the royal residence of the kings of Numidia, of whom Micipsa, according to Strabo, did the most to enlarge and improve it. Compare the words of the geographer (Strab. 17. vol. vi. p. 669.) It was afterwards called Sittianorum Colonia, from P. Sittius Nucerinus, who greatly assisted Cæsar in the African war, and was rewarded for his services with the city and district. Compare note on Catiline, c. 21.’

In the notes on *luxu* (dative), c. 6, and *die* (genitive), c. 21, we have the best kind of illustration in a collection of passages where the same forms occur. There is an excellent note of the same character on c. 16, in reference to the words *fama*, *fide*, the length of which alone prevents us from quoting it. Moreover, Mr. Anthon takes considerable pains in referring his reader to the other authorities for the different historical facts given in the text of his author. Notes of this kind have the twofold advantage of brevity and utility.

On the whole, we find it extremely difficult to come to a conclusion as to the merits of Mr. Anthon’s edition. There is much that is good in it; there is also much that might be improved or totally erased. With this qualified opinion, we must leave the book in the hands of our readers.

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#### ELEMENTS OF ALGEBRA.

*The Elements of Algebra, designed for the Use of Eton School; by the Rev. John Bayley, M.A., late Fellow and Mathematical Lecturer at Emanuel College, Cambridge.—London: Whitaker, Treacher, and Co.*

THIS is a book for the use of Eton, well printed, and imposing in its appearance. We can now see how algebra is taught in one of our largest public schools. It opens with a definition of algebra, and an ‘ explanation of algebraic characters,’ in which the most material omission is, *what is meant* by the letters that are put down. It begins, ‘ The number prefixed to an algebraic quantity is called its coefficient;’ but *what an algebraic quantity is*, this deponent

sayeth not. It proceeds to the symbol —  $7ax^1$ , which is called a *quantity*; while, just before, it is said that ‘when *one* quantity is to be subtracted from *another*, it is preceded by this sign (—).’ This mystification goes on throughout, and its frequency in elementary works is thought to palliate its absurdity.

The work is divided into two parts; the first consisting entirely of rules and examples, the second of the same processes repeated more rationally. Strange to say, there is nothing on simple equations in the first part, though quadratic equations are introduced. Ratio is said to be ‘the relation, in point of magnitude, which one quantity bears to another of the same kind. For instance! the ratio of ( $a$ ) to ( $b$ ), expressed thus ( $a : b$ ), denotes the magnitude of ( $a$ ) with respect to ( $b$ ); and when two ratios are equal to one another, the four quantities composing them are said to be proportionals.’ Here is the old definition of Euclid, which is allowed to mean nothing; but it is not here, as in Euclid, that the unmeaning phrase is followed by a test of equality of ratios which supersedes the preceding definition. The moment after we come to this—‘It appears from the definition that  $\frac{a}{b} = \frac{c}{d}$ .’ We confess we cannot see this.

The extension of the law of exponents to fractional powers is assumed, and not proved. The imaginary expressions  $\sqrt{-a}$ , &c. are introduced without the slightest notice of their nature, except what is contained in the name *imaginary*. The author seems to think that it is justifiable to convert a theorem into a definition, for we find, ‘if a room be 8 yards long and 5 yards broad, the floor is *said* to contain  $8 \times 5$  (or 40) square yards.’ Now, the only conventional part of this is the saying ‘square yard’ instead of ‘square whose side is a yard;’ the remainder is a demonstrable theorem. But as if to make up for sometimes admitting as a definition what ought to be proved as a theorem, we find a contrary course pursued, and that which is conventional stated as a result of demonstration. For example:—

•  $\frac{x^3}{x^4} = x^{3-4} = x^{-1}$ ; but  $\frac{x^3}{x^4} = \frac{1}{x}$ ; therefore  $\frac{1}{x}$  is the same as  $x^{-1}$ . In like manner it may be shown that  $\frac{1}{x^2}$  is the same as  $x^{-2}$ .

We find in Logarithms the following:—‘If we assume a certain quantity,  $a$ , with a variable index,  $x$ , it is evident that, by taking every possible value of  $x$ , the quantity  $a^x$  ma

represent all numbers whatever.' In the first place, this is not correct ; in the second place, if it were, it is not *evident*. Can the author tell us what value must be given to  $x$  to make  $10^x = 9$ ? He will answer that he can take  $x$  so as to bring  $10^x$  as near to 9 as we please. That is true, but it is not what he asserted.

There is a chapter on arithmetical notation at the end of the first part, which is better than the rest ; but we do not see the use, in so small a treatise, of establishing a formula for perfect numbers. The second part contains proofs of many of the rules in the first, and commences, very rationally, with simple equations, this being in reality the most simple part of algebra. The whole is easy and correct until we come to the chapter on involution. Here the binomial theorem is proved ; and, though we do not object to the execution of this part, we cannot see how pupils trained after the preceding methods can understand it. After several chapters, we come again to the subject of logarithms, where we find an oversight of this nature. The development of  $(1 + b)^x$ , arranged in powers of  $x$ , is asserted to be

$$1 + x \left( b - \frac{b^2}{2} + \frac{b^3}{3} - \&c. \right) + \frac{x^2}{1.2} \left( b - b^2 + b^4 - \&c. \right) + Rx^3 + \&c.$$

The coefficient of  $\frac{x^2}{1.2}$  is totally wrong ; it should be  $b^2 - b^3 +$

$\frac{11}{12} b^4 - \&c.$ , being, in fact, as is afterwards proved, the same

as  $(b - \frac{b^2}{2} + \frac{b^3}{3} - \&c.)^2$ . Surely the author should have

observed the remarkable form of  $(b - b^2 + b^4 - \&c.)$ , as he evidently means the law established in the two last terms to continue ; and, had he really satisfied himself of its truth, he should have caught at the immediate consequence, which

is  $(\text{Log. } b)^2 = b - \frac{b^2}{1+b}$ ; a result hitherto unsuspected by

mathematicians, and which would have established his fame as an analyst to the end of time.

The author of this treatise must excuse our speaking plainly about his book, of which we can neither approve the plan nor the execution, except that, as to the latter, the rules given are free from ambiguity. He is a man of talent, meant for better things than combining (we cannot add arranging) the numerous absurdities prevalent in our algebraical works. He owes it to his situation not to let

the mathematics, already sufficiently looked down upon in our public schools, be exhibited to youths who are likely enough to despise the study, in a shape which will furnish some excuse for their contempt.

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### LESSONS ON NUMBER.

*Lessons on Number, as given in a Pestalozzian School, Cheam, Surrey.* John Taylor, London, 1831.

THIS work forms a part of the same series of publications as the Lessons on Objects noticed in the first number of this Journal. They deserve general attention, as professing to be the result of actual experience; and the treatise now under consideration has accidentally also a peculiar claim on our notice, from the circumstance that, in the article already referred to, the science of number was one especially pointed out as requiring elucidation on the principles adopted in the Lessons on Objects. We are, therefore, desirous of examining with what success this has been furnished by the publication before us.

The plan on which it is intended that the first processes of arithmetical instruction should be conducted, is stated by Dr. Mayo, in a preface which he has contributed to the work, the body of which is written by a foreigner; and a few short extracts will best show the scope of the treatise, and the principles on which it is meant to depend. After a well-merited panegyric on Professor De Morgan's Treatise on Arithmetic, Dr. Mayo observes—

‘The aim of the little work now offered to the public is different; it does not propose to explain processes, but to unfold principles. The pupil is not taught to comprehend a rule, but to dispense with it, or form it for himself. The path along which he may be led may be longer than the usual route; but then it is in broad daylight, he is more independent of his guide, and derives more health and vigour from the exercise.’ . . . ‘When the true end of intellectual education shall be admitted to be, first, the attainment of mental power, and then the application of it to practical and scientific purposes, that plan of early instruction, which dwells long on first principles, and does not make haste to make learned, will be acknowledged as the most economical, because the most effectual. Experience will show, as it has indeed already shown, that while superficial teaching may prepare for the mere routine of daily business, whosoever a question, not anticipated in the manual, occurs, none but the pupil whose faculties have been exercised in the investigation of truth, who is the master—not the slave of rules, will

solve the unexpected difficulty, by a novel application of the principles of the science.'—*Preface*, pp. viii. x.

'In this preparatory course' (a course of instruction previously described as rather intended to train the mind for the study of the science, than to communicate the knowledge of it) 'the order is determined by a consideration of the mind of the pupil; it commences with what is already known to him, and proceeds to the proximate truth; the more easy precedes the more difficult, the *individual* prepares for the *general* truth, the *example* for the *rule*.' . . . 'It is strongly recommended that it be used as a course of *mental* arithmetic; that is, the questions should be solved in the head, without any figures being written on the slate by the pupil. In this manner it retains more of its character as an *intellectual* instead of a *mechanical* exercise. The vigour, freedom, activity, clearness, and retentiveness of mind, which a persevering adherence to the plan imparts, will prove an ample compensation for any additional trouble which it may seem to occasion.'—*Preface*, pp. xi. xii.

With the latter part of this extract,—that which enforces the importance of exercises in mental arithmetic,—we entirely agree. They furnish very much the best foundation of all arithmetical knowledge; and probably have only failed to be generally used for that purpose, because it is less trouble for a teacher, if idle, to look over a written sum, than to attend to all the steps as orally expressed; or because it is easier for him, if ignorant or unthinking, to examine results by applying a mere rule, than to attend to, and explain the difficulties which a child may meet with in the course of an operation. If this publication shall induce any parents or teachers to attach more importance to the exercises which it recommends, it will not fail to be of great and enduring value. And it ought to have this effect; for, whatever may be its imperfections in other respects, it at least furnishes a large collection of questions suited to the faculties of children in the early stages of mental arithmetic, carefully arranged in a progressive order \*, from the very

\* This commendation of the order observed must not be taken without some allowance. The general principle of the work is to observe it, but there are some few singular inversions. At page 78 a very remarkable confession of disorder occurs:—'The pupils should, therefore, be well acquainted with similar divisions, which, by means of the subdivisions of a line, may easily be obtained by them. The *following exercises* ought, therefore, to precede the *above*.' If this were an after-thought, the hurry of publication may explain why the transposition thus recommended was not actually made; but it will not justify the failing to make it. There are other symptoms of a haste to publish, which is a good deal to be regretted. We had occasion, in our notice of Professor De Morgan's Treatise, to speak of the incorrectness with which it was printed, and the observation is too often applicable to works of science; but some parts of the present work, for it is very unequal in this respect, very far exceed any ordinary limits of inaccuracy. In page 81, there are no less than eight errors of the press. There is also a good

simplest possible, to the more complicated examples which it comprehends. The observation of this order is strongly recommended in the work itself; and undoubtedly, although it sometimes occasions a little tediousness, especially when combined with another cause, which we shall hereafter have to mention, it is, on the whole, very desirable to adhere to it. Another important merit of the work consists in the manner in which, in its earliest pages, the idea of number is extracted from the consideration of the objects by which it must in the first instance be exemplified. It is done without any parade of abstraction, but successfully and completely; and the author, without being in too great a hurry to get rid of the sensible objects which he at first employs, is very soon able to do so.

In proceeding to the examination of other parts of the work before us, we enter upon more questionable ground. We shall not have occasion for much of particular criticism on the execution of different portions of the design: the point mainly to be considered is the principle adopted; for it is in this respect that the work puts forth the strongest claims to attention. If we are entitled to take the earlier portions of the extracts already made from Dr. Mayo's preface, in their most obvious sense, as furnishing the exposition of this principle, it contains nothing from which we should dissent, and very little which we should wish to qualify. But there is some ambiguity in the expressions used, and when we take the 'Lessons on Number' themselves, as a commentary on the text of the preface, we fear that there may perhaps be more difference between our notions than we should otherwise have suspected.

Dr. Mayo, after explaining that upon his system no technical rules are given antecedently to examples, informs us that the pupil is not taught to comprehend a rule, 'but to dispense with it, or to form it for himself;' 'that the individual prepares for the general truth, the example for the rule.'

deal of inconsistency in the manner in which fractions are represented; they are generally reduced to their lowest terms, but by no means uniformly so, and the exceptions do not appear to depend on any fixed principle, or to have any particular object. In another respect, also, the employment of a very little time might have produced much benefit. Dr. Mayo, in his preface, claims indulgence for any inaccuracies of style or inelegancies of expression in the body of the work, on the score of its author being a foreigner. Surely it would have been more to the purpose to have had the proof sheets revised by an Englishman. The alterations required would have been very trivial, and might have been made with the utmost ease; but they would not have been unimportant. The inaccuracies which now occur are not frequent, but they sometimes occasion difficulty in understanding the passages where they are found.

The author of the work, to which these remarks are prefixed as an introduction, says—

‘Thus, without assistance of rules, generally little understood, by a chain of simple reasonings, easily ascertained by facts equally simple, we arrive at results hitherto inaccessible to the understanding of a child.’ p. 97. ‘Such were the answers, nor early such, that have actually been given by children of the age of nine or ten years. We give no rules but those found by the pupils themselves; they are fetters which enchain the powers of the mind, and deprive it from ever attaining strength and vigorous health.’ pp. 69, 70.

The reader must not understand from the last passage, that the child is *generally*, in this treatise, led up to the construction of rules for himself, or that such rules are the ‘results’ spoken of in the preceding extract. There are, indeed, some instances of the attainment of such rules, but they are few; and the results generally consist merely in the solution of particular questions. Are we, therefore, to understand that when the pupil is taught either ‘to dispense with a rule, or to form it for himself,’ it is immaterial which he does? and that when ‘the example *prepares* for the rule,’ it is the object of this treatise to furnish such a preparation *only*? The former of these is a question of general importance; the latter chiefly affects the value of the particular work, and perhaps calls for little remark, except that, if the treatise be meant to furnish only an introduction to rules, it furnishes one of extraordinary and, we think, unnecessary length.

On the main question, we entertain no doubt of the thorough soundness and great importance of the principle, that it is desirable, as far as possible, to conduct a child gradually, by his own observations and induction, to the rules which he is hereafter to apply. All knowledge acquired by reasoning and observation is more valuable, and is better known, than that which is received on the authority of others. It is better known, because, in the process of its acquisition, it has been seen in various bearings and connexions, and because the principles on which it depends have been fairly worked into the mind, and remain there, capable of the same and further applications, even if the results originally deduced from them are confused or forgotten. It is, for the same reason, more valuable; and yet more so, because the process of acquisition has exercised the most important faculties of the mind, instead of being confined to the exercise of others of inferior dignity—namely, memory, and a certain degree of attention and distinctness in comprehending the application of a set form of words, and performing the operations which they direct. Whenever, therefore, a child can be led

to form, to think out as it were, a rule for himself, it is most desirable that he should ; but it does not, therefore, follow, that in cases where he is unable to do so, the rule should be suppressed or omitted ; nor does the mere fact that he may be taught, without the rule, to perform the same operations, prove that the rule is superfluous, or ought not to be communicated, when the operations without it are much more laborious and circuitous than when it is applied. Where, indeed, the principle of the rule is unintelligible, even when communicated, it may generally be desirable to suppress it : there may be more harm in accustoming the mind to take things upon trust, than in leaving it without the practical assistance to be derived from the rule itself. But the more common case will be that of a rule not within the compass of the learner to discover, but admitting of full explanation and proof, such as he can comprehend, when it is once announced to him. And these rules it appears to us desirable to communicate ; not in the first instance, indeed, before the want of them has been found, and their value consequently appreciated, by examples of the same operations performed without them ; but as soon as these preliminary steps have been gone through, and without waiting till the same cautious process has been carried into other departments of the subject.

Perhaps the importance of the alteration thus suggested will most fully appear by one or two instances of the inconvenience and imperfection occasioned by the plan adopted in the work before us ; and we will take one where it would be difficult, or perhaps impossible, to conduct a child to the discovery of the rule required, yet the rule is perfectly intelligible when explained ; another, where the rule itself, by a series of questions artificially combined, might become the result of the pupil's own speculation. The first of these is the principle of numeration.

It may appear that, as the great value of a system of numeration is the facility which it gives to the operations of written arithmetic, it would be superfluous to take any notice of it in a collection of examples designed for exercises in mental arithmetic only. This, however, is hardly the case, when we look to the execution of the work before us ; for the pupils, though forbidden the use of pencil and slate in performing the operations required for them, are occasionally allowed the assistance of seeing the question itself written before them (p. 70), so as to keep the data on which they are to proceed before their eyes, during the course of the operation founded upon them ; and in page 45 it is said to be desirable that the pupil should write the answer to

particular questions ; ‘ yet the pupil is not supposed to have any knowledge of the expression of numbers by figures. The teacher should instruct him in the use of the conventional signs, though the pupil might write, *in words*, the result of his calculation.’ The questions here referred to have, among their answers, such numbers as 25, 50, 100 ; the conventional signs required, therefore, are not merely the figures 1, 2, 5, &c., but those figures with their values determined by the places which they occupy, or by the system of numeration adopted. Both for its importance, and for the care required in its explanation, the mode of ascertaining these values should be most particularly pointed out ; but this, as we have seen, is left to chance, and to the unassisted discretion of the teacher in filling up the void, which is pointed out in the above extract, but not supplied.

The inconvenience and evil of the omission, however, even upon the most limited acceptation of the scope of the treatise before us, is not confined to the impracticability of using the particular aids required in the above examples ; it runs through the whole tenor of the treatise, and produces exactly that effect of confusion and uncertainty, which it is the general object of the plan to avoid. The necessity of some system of local values, or rather, when we speak without reference to the representation of numbers in writing, of some mode of breaking up a large number into different parts for the convenience of operation, does not require any proof here, and a very small number of instances would make it intelligible to a child. Indeed, this is done in the work before us ; for, although no account is given of the division of a number into tens and units, or hundreds, tens, and units, &c., as the case may be, this division is practically used. But why is ten selected as the scale ? why is the same scale always used ? why is the result finally represented according to it ? Thus, in page 14, we have the following instance :—‘ 37 and 49 are 3 tens and 4 tens and 7 and 9 ; or 7 tens and 16, or 8 tens and 6, or 86.’ Why is this rather worked thus than in the following manner : 37 and 49 are 4 nines and 5 nines and 1 and 4, or 9 nines and 5 ? or, working it as it is worked, why is not the result left in the shape of 7 tens and 16, like three score and twelve, or expressed in the French way, which furnishes a closer analogy, *soixante douze* ? It is no answer, to say that we break up the number into tens and units, rather than into nines and units, or any other scale that might be assigned, because the expressions thirty-seven and forty-nine furnished at once, from their construction, the means of making the first

separation, and not the others ; for they only do so, because they are founded on a principle of numeration ; and it is, therefore, only by the partial adoption of this principle that they furnish the facility relied upon. In a system of education which professes to look more to the formation of habits in the mind, than to the actual results obtained at an early period, it is surely inexpedient to allow this sort of half-knowledge, neither acquired by the pupil's own researches, nor explained by the teacher, but picked up incidentally, and almost unconsciously, as an arbitrary rule for the arrangement of numbers ; resting, as far as the learner is concerned, upon no principle, and producing, as far as he sees, no advantages. And it seems to us unnecessary that it should be so : because, though the notion of a scale is too artificial for the pupil to be led to form one for himself, it admits of an easy explanation ; and the probable reason for choosing ten as the scale, from its being the number of the fingers, is a fact just of the kind which a child will fully comprehend, and will, therefore, hear with interest, and remember with ease. Any advantages which that particular scale presents for purposes of computation cannot of course be presented intelligibly to a learner ; but the necessity of adopting some mode of dividing numbers, and the convenience of making that mode uniform, may be made sensible to him, and *some* reason given for adopting this particular method in the circumstance already adverted to. We cannot but think that, if the advantage rested here, the mind would be better educated thus, than by leaving a child entirely ignorant of the principle of the arrangement adopted, or even of the fact, except by the comparison of a large number of instances, that there is any uniform mode of arrangement at all.

The evil, however, is very far from stopping here. When a principle of numeration, or of considering a number as divided into the successive powers of the number adopted as the scale of notation, is once established, every operation becomes a precedent for another : the mode of operating on tens and units is a proof of that for operating on hundreds and tens, for the quantities involved are similarly related : they are, therefore, only instances, in fact, of the same operation, the addition of 220 and 130, or of 22 tens and 13 tens, being obviously exactly the same thing as that of 22 apples and 13 apples, the tens in the one case, and apples in the other, being merely the subjects on which the operation is performed. There may be different ways of expressing this ; and, of course, it would require much both of simplification and expansion before it was introduced to children ;

but, directly or indirectly, something of the kind is absolutely necessary, or else all the processes of arithmetic are reduced to mere *counting*, and the learner is not able to form any conclusion respecting numbers exceeding those which he has actually reckoned up to. Thus, in page 24, we learn that '705 less 359 is 70 tens and 5 less 35 tens less 9, which are 35 tens and 5 less 9; that is, 355 less 9 = 346;' where the principle of numeration mentioned above is obviously adopted, but indirectly, and without explanation; and the final solution, that 355 less 9 = 346, depends only on the pupil being supposed previously to have learned to add the particular numbers 9 and 346. The reader of this article, indeed, may feel some doubt whether the latter step is correctly represented; but on reference to the page in question, he will find that no other means of performing this operation have been given; that the only simplification pointed out is the division into tens and units; and that the units are always subtracted directly from the remainder, after the deduction of the tens, without any direction as to the mode of performing the operation. In the same manner, the division of 732 by 2 is thus conducted in page 37: '2 is contained in 700, 350 times; in 30 it is contained 15 times; and in 2 it is contained once; therefore 2 is contained in 732, 350, 15, and 1 times, that is 366 times.' The first step of this process, that 2 is contained in 700, 350 times, must have been arrived at in one of two ways: either by taking the successive multiples of 2, up to that number, and treating the result as a mere matter of recollection, or else by subdividing 700 into 6 hundreds and 10 tens, and taking the half of each of those quantities. In the former case it is, as before, mere counting; in the latter, besides that it is indirectly numeration, what reason is there for avoiding the convenience of operating in the same way on the more complex number 732, which is supposed to have been already adopted in the case of the simpler number 700?

These are instances enough of the inconvenience occasioned by the omission to teach any system of numeration; but the first of them leads us incidentally to the mention of another omission of a different kind, that of a rule which the learners might, we think, be led to form for themselves. It is perfectly obvious that, if a number be divided into any two parts, each greater than another number which is to be subtracted from it, the remainder, when the subtraction is performed, will be the sum of one of the parts of the original number, and of the difference between its other part and the subtrahend. It is plain, also, that the less the difference be-

tween this latter part and the subtrahend can be made, the simpler will be the operation of subtraction. If the latter could be at once taken equal to the subtrahend, the operation would be at once performed : in the absence of this, the nearer it is taken, the less knowledge of particular values, or the differences between particular numbers, is required. For instance, referring to the example already taken, of the subtraction of 359 from 705, the question is only solved by the knowledge of the fact that the difference of 9 and 355 is 346. Would it not be much better to show that  $355 - 9 = 300 + (55 - 9)$ , or  $300 + 46$ ? or, as this involves the knowledge of the fact that  $55 - 9 = 46$ , to subdivide the number differently, and say either that  $355 - 9 = 340 + (15 - 9) = 340 + 6$ , or that  $355 - 9 = 345 + (10 - 9) = 345 + 1$ . The pupil might, we think, be easily led, by progressive examples, to find out for himself that the best mode of dividing the larger number was one of those above suggested ; the former requiring no knowledge of the actual differences between numbers, except the differences between each number under 10, and all the numbers not more than 9 greater than itself ; the latter requiring none except that of the differences between 10 and every number below it. The same principle would require a little, but not a difficult extension, to meet the case of a subtrahend consisting of more than one digit ; but, when the principle of numeration was once established, it would be a mere extension. And, when this extension was made, the result of using the former mode of subdivision would be, in substance if not in form, the common rule for subtraction, or, rather, the nearly equally commodious rule which diminishes the digits of the number from which the subtraction is made, instead of *carrying*, as it is called, or increasing the digits of the subtrahend ; and that of using the latter subdivision would be, in substance, the rule for using the arithmetical complement.

We have given these instances of the omission of rules, the former as the most important, the latter as one which, in our judgment, might have been easily and beneficially supplied. We do not propose to give any other examples, or to enter into any other criticisms of detail ; but the omissions already pointed out, especially that of numeration, lead to one important remark affecting the general execution of the treatise before us. If the rules and principles of arithmetic are philosophically deduced and explained, the acquisition of any one makes all the others easier of attainment. It is not that the one rule involves or explains another, but it involves a general knowledge of the nature of number itself, a gene-

ral facility and distinctness in dealing with it ; and the principle of numeration, more than anything else, requires and produces this familiarity. While, therefore, we fully allow the expediency of beginning every new stage of the science from the very commencement, from the easiest and simplest examples, instead of passing immediately from rule to rule, we should expect that in each successive stage the number of these mere examples might be diminished ; that the general familiarity with number and its relations acquired in the learning of one rule would, in some degree at least, facilitate the acquisition of the next, and that the simplifications finally adopted in one case would suggest corresponding contrivances at an earlier period of another. We do not, however, find this gradual shortening in the treatise before us, or, if it exist at all, it is in a very slight degree ; and we can assign no other reason than that the omission of rules does, in fact, prevent the learner from acquiring the same command over his subject which his acquirement of them would give him. We say that it does so in fact, because the treatise professing to be the result of actual experience, we must suppose that the numerous examples given throughout the work before us are not more than have been found practically necessary on the system adopted. The omission of rules, therefore, is that cause of occasional tediousness, to which we have already adverted.

In referring to the work before us as the result of experience, and using that experience in consequence, as bearing some testimony against the plan adopted, as far as the exclusion of rules forms a feature of it, we are not insensible to the weight which the treatise derives from the same consideration. A process which has been found by experience to work well cannot but deserve respectful attention, and any strong and unqualified censure of it could hardly fail to be misplaced. We are very far from intending so to deal with the ‘*Lessons on Number*;’ on the contrary, we think that, even in their present state, they may be used with much advantage. We think, however, that they might be very materially improved by the addition of some of the matters already suggested in this article. We cannot, indeed, help fancying it likely that many of the omissions of which we complain may practically be supplied in the course of those oral instructions, the results of which are embodied in the work before us ; and that the pupils may incidentally be taught much which we are of opinion that they ought to learn, and which the published work does not show us that they do. The knowledge in question may be acquired in

different cases at different stages of the process, and from this want of uniformity in the method and time of gaining it, it may fail to find a place in the system as published. Still, as the knowledge itself seems to us of the greatest importance, we cannot but be of opinion that the 'Lessons on Objects' would be improved if they were systematically directed to its acquirement.

Until some such alteration is made, we think that the treatise would be more beneficially used in combination with other works on the same subject than alone. With all the importance which we attach to the exercises of mental arithmetic, we see no occasion for making a complete course of it precede any introduction to written processes; nor is it necessary to confine its operations, as the present treatise seems to confine them, to examples which scarcely require the aid of rules for their easy and commodious solution. Regarding the 'Lessons on Number,' therefore, as a very valuable collection of questions and examples, arranged in the order recommended by experience, we would use them as an introduction to each rule or department of the subject. But when a certain familiarity with the practice had been thus acquired, instead of passing on to the practice of the next division, we would introduce the learner to the rules devised for the convenient performance of that on which he had already been engaged; these rules, of course, not being delivered to him as mere arbitrary formulæ, but being explained to him from the work of Professor De Morgan, or some other treatise founding them upon reasoning and demonstration. When the rules were thus acquired, we would recommend a further course of their application, both by writing and by mental operation, before proceeding to the next division of the subject. The length of this would depend on the attention and dexterity of the pupil; it would generally be short: and it might not always be necessary to wait scrupulously for the completion of one subject before proceeding to any consideration of the next. In passing from one division to another, we would again begin with the 'Lessons on Number,' and proceed, as they do, from the very simplest examples. But we are much mistaken if the number of those required would not be found rapidly to diminish at each successive stage of the process, and if the whole science would not be acquired both more rapidly and better, and more real exercise and improvement afforded to the mind, by this mode of procedure, than by adhering closely to that adopted in the work under our consideration.

## SMITH AND DOLIER'S MODES OF TEACHING.

We have always imagined something very like quackery to exist in the various Inventions of Messrs. Smith and Dolier, ' all having for their object the saving of time and labour, and rendering education much more agreeable and easy than it has hitherto been.' These, if indeed they be inventions, have but a very slender title to the name, while the importance with which their respective merits are ushered into notice is wholly disproportionate to their intrinsic value. They are, indeed, of too trivial a nature to claim the attention of this journal. We have, however, read with great pleasure a small volume,\* recently published by Mr. Smith. The awfully long title, and the tone of self-commendation which prevails throughout the volume, might, on a cursory glance, induce the belief, that this work is of the same class as the before-mentioned inventions of the writer ; but, after a careful perusal, we are of opinion, that the ' Key to Reading ' may fairly take its rank among books of utility in the business of education. It evinces rational views and much practical knowledge of the subject ; and we are constrained to acknowledge, that its author is very superior to a mere ruler of copy-books, and a maker of *delible* ink. We understand that Mr. Smith is assisting by lectures, as well as by other exertions, in the important object of enlightening the rising generation, and we cannot doubt about the beneficial influence that must attend such methods of enforcing sound principles, and of persuading to rational practice.

The plans proposed by this gentleman are not, perhaps, quite as original as he may consider them, but he has the merit of causing them to become of extensive utility, inasmuch as the best parts of the most rational systems are brought forward in his volume, in an attractive popular form, calculated far more certainly to promote their adoption than if clothed in a more elaborate treatise, or encumbered by the technicalities of learned disquisition.

The ' Key to Reading ' is explanatory of a method whereby this branch of education should be conducted, and which may be pursued with advantage by all who are interested in the

\* A Key to Reading ; designed to assist parents and teachers to superintend lessons for youth with pleasure and advantage to themselves and their pupils. To which are added, An imaginary grammatical picture. An introduction to mental Arithmetic, and a sketch of Muemonics. By John Smith, Lecturer on early Education, &c. Second Edition: pp. 108. Simpkin & Marshall, Stationers-Hall Court.

improvement of their pupils. The plan which it enforces is, perhaps, already partially practised by many rational instructors—

*'The prominent feature of the plan is to ascertain whether a pupil understands as much of every word he reads in his lesson as the instructor himself; and if not, it is then the province of the latter to afford all the information he can to the former, not only on the words under inquiry, but in reply to the questions of the pupil himself, who may suddenly be reminded of a word he has met with, at another time, and respecting which he feels himself to be ignorant.'*—p. 34.

It may be said, that there is nothing very original in this; the extent of its application is, however, certainly new—

*'The principle of examination into the words and sentences of lessons is, as I have already stated, old and well known; I wish it had been as well practised; but there is a beauty and an extent to which it may be carried, of which few persons can have an adequate idea, until an example is given to them, and then a union of pleasure and instruction is presented to their contemplation far surpassing anything arising from ordinary mental exercises, and rendering (so far as reading is concerned), not only the school-room, but the domestic circle, a scene of endless and ever-varying amusement.'*—p. 8.

The practical illustration of the above principle was first suggested to Mr. Smith, by the perusal of an account of the Edinburgh Sessional School, written by John Wood, Esq. In this work our author found all his own ideas on the subject fully exemplified, and he accordingly inserts a copious and most interesting extract from the chapter in Mr. Wood's publication on the explanatory method in reading, which is replete with good sense and valuable views on the science of education. In this useful institution of the Scottish capital, the pupils are made to analyse every sentence as they read it, showing thereby that they thoroughly understand its meaning, while opportunity is taken by the instructor for imparting any general information with which the subject under discussion may naturally be connected. This is done in a manner which robs scholastic hours of their austerity, and converts an irksome task into a pleasurable exercise. Mr. Wood observes—

*'It is the constant remark of almost every stranger who visits the Sessional School, that its pupils have not at all the appearance of schoolboys, doomed to an unwilling task, but rather the happy faces of children at their sports. This distinction is chiefly to be attributed to that part of the system of which we are here treating; by which, in place of harassing a pupil with a mere mechanical routine*

of sounds and technicalities, his attention is excited, his curiosity is gratified, and his fancy is amused. In the second place, when proper books are put into the hands of the scholars, every article which they read may be made the means, not only of forming in their youthful minds the invaluable habit of attention, but also of communicating to them, along with facility in the art of reading, much information, which is both adapted to their present age, and may be of use to them for the rest of their lives. How different is the result, where the mechanical art is made the exclusive object of the master's and the pupil's attention! How many fine passages have been read in the most pompous manner, without rousing a single sentiment in the mind of the performer! How many in which they have left behind them only the most erroneous and absurd impressions and associations!" . . . .

. . . . 'A gentleman had, when young, been accustomed, like most schoolboys, to read, and probably to repeat, without the slightest attention to the sense, Gray's Elegy, not uncommonly known in school by the name of "The Curfew Tolls." What either "curfew" or "tolls" meant, he, according to custom, knew nothing. He always thought, however, of *toll-bars*, and wondered what sort of *tolls* were *curfew-tolls*; but he durst not, of course, put any *idle* questions on such a subject to the master. The original impression, as might be expected, remained, and to the present hour continues to haunt him, whenever this well-known poem comes into his mind.'—p. 11.

The words contained in a sentence are not simply explained with reference merely to the text, but also with a view to future exigencies, and in some cases their roots, derivatives, and compounds are pointed out. Thus, if the word 'unprecedented' should occur, its meaning is not simply given, but the attention of the scholar is directed to the three-fold composition of the word, the *un*, the *pre*, and the *cede*, while he is invited to furnish some other examples, where the syllable *un* signifies a negative—then to illustrate the meaning of the syllable *pre* in some other words of which it forms a part; and, lastly, the signification of *cede* coming under examination, the meaning of its various compounds is required. Mr. Smith was induced to visit the establishment where so judicious a mode of instruction is practised, and he furnishes an interesting account of what passed in an examination of some of the pupils.

Although these belong to the humblest classes, they possess an advantage which rarely falls to the lot of any description of scholars,—that of having an enlightened philanthropist to direct and watch over their studies.

Mr. Wood, formerly pursuing the profession of an advocate, is now retired from business, and devotes nearly all his time and his talents to the superintendence of the Sessional

School, and the advancement of its pupils. With unremitting zeal does this benevolent gentleman 'afford the benefit of his valuable assistance to the teacher and the pupils of the school, in attending to the duties of which from ten till three o'clock every day, he is almost, if not quite, as punctual as the stipendiary master himself.' Many visitors attend this seminary, and take a great interest in all that is going forward. Passages are selected out of the school-books by any stranger present ; and after one of the pupils has read a chosen paragraph, he is required to close the book, and give, in his own language, an account of what he has just read. Each person present is then at liberty to put questions to any of the children who compose the class, relating to the signification of the words, their parts of speech, the grammatical construction of the sentences, or any other question bearing upon the subject under discussion. Mr. Smith fixed upon part of a book which appeared to have been least 'travelled over,' and proposed a particular passage for perusal. The success which has crowned the benevolent exertions of Mr. Wood is instanced in the examination that ensued. The limits of the present article will not allow the insertion of the whole in detail. The pupils evinced throughout a knowledge of language, a clearness of ideas, and an acuteness of discrimination, which those who have only witnessed the made up exhibitions of other charitable institutions for education, can scarcely credit as having been displayed by any youthful scholars, and more especially by the children of labour. If these be, indeed, the spontaneous answers of the pupils, and we have not the slightest reason for questioning the fact, they exhibit a far greater degree of intellect than is usually found in seminaries wherein the higher classes are usually educated. Let it be remembered, however, that, in the present case, no long tasks had repressed the desire of knowledge—no grievous burden on the memory had deadened the other faculties—but the mind had been expanded by a judicious course of instruction—the pupils had been incited to inquire, to think, and to reason—they had been called upon to exercise with pleasure those powers which become more vigorous and acute in proportion to their healthful exertion. This is indeed a triumph over the antiquated systems of mechanical learning.

One or two short extracts of the examination are given, as they may perhaps afford some idea of its nature, and of the proficiency of the scholars—

' Q. It is said, " These were the breathing times of our heroes." What were the breathing times ?—A. Short intervals in the battle.'

‘ Q. What is meant by “to breathe” literally?—A. To respire.

‘ Q. By what word would you express to “breathe in?”—A. To inspire.

‘ Q. How would you express to “breathe out?”—A. to expire.

‘ Q. How would you express to “breathe through?”—A. To perspire.

‘ Q. What word would describe ot “breathe together?”—A. To conspire.

‘ . . . Q. What is “immediately?”—A. Literally, it signifies, nothing being in the middle.

‘ Q. How would you express to go in the middle as between parties?—A. To mediate.

‘ On the word “anxious” occurring, I asked one of the boys its meaning. He said, being anxious was hoping for or desiring. I asked, would not the word “eager” express as much as that? “Yes,” said he; and then, as if a new distinction had struck him, he said, “but there is a fearfulness included in anxiety which is not expressed in eagerness.”—p. 32.

In how superior a degree are the minds of these poor children stored with clear ideas, invested with the powers of reasoning, and incited to a disposition of profiting by their education in after life, than are those of the unreflecting beings who have been driven through the ordinary course of school routine.

The second part of this work explains and recommends a novel and pleasing manner of teaching the elements of grammar to young children. It is justly remarked by the author that—

‘ Tasks in grammar are not only unnecessary, but useless, and indeed mischievous. They are unnecessary, because the object in view may be attained *without* them; they are useless, generally at least, because that object is *not* attained by means of them; and they are mischievous, because, from their dulness and unintelligibility, they fatigue the spirit and disgust the mind of the learner, who is consequently led to regard the acquisition of knowledge as a disagreeable, instead of what it truly is, a delightful employment.’

The parts of speech are here explained in an amusing conversation between the instructor and his pupil. The former, after explaining that there are only nine sorts of words which can be uttered, and that in learning to distinguish these, consists the first knowledge of grammar, proposes to form an imaginary picture, and invites each of his pupils to name something which shall be placed in it. After many images are grouped in this mental landscape, the children are told that all the words they have given are called nouns, and the teacher endeavours to impress this information on their minds. He then continues—‘ You see the picture is in no sort of shape yet; all the things are jumbled together in

confusion. We must have another sort of words to put them into order. Where shall your cottage be ? One of the little scholars may perhaps say *near* a brook, another upon the hill—these words called ‘prepositions, which indicate the position of things in relation to each other,’ are then explained and exemplified. The teacher proceeds thus to the adjective,—

‘ But we must improve this picture still more yet. You gave me only the *names* of cottage, church, &c., without telling me what *kind* of cottage, church, &c., you would have, whether large or small, old or new, &c. We must therefore take that little painter’s brush called an *adjective*, and give some character to all these things. What sort of cottage will you have ?’

After the children have each given their answer, the part which an adjective performs in a sentence is distinctly shown. The verb is then introduced :—

‘ Well, our picture begins to look handsome now, both in form and colour ; but there is a sad want of life in it. “ All, all is still ” We must therefore give a little animation to it by using a few verbs. You will think it impossible to give life or action to a cottage or church, but you can give it a *state of being* ; it can stand, it can reflect the sunbeams, &c., and these are verbs. But try some of the other nouns, what shall your bells do ?’

Different verbs are then brought forward, and the children are ‘initiated into a perception of verbs.’ The conversation is continued in the same playful manner, until the picture is completed, and the pupils are thus familiarly introduced to the nine parts of speech.

Grave persons who have forgotten their first scholastic troubles, may perhaps deem all this trivial and puerile ; but those who still recollect, with disgust, the long grammar lessons which they were compelled to lisp with tremulous voice, ere yet they could distinctly pronounce, and still less understand them, will feel grateful to Mr. Smith for having rescued their children from the same imposition, and for having associated pleasurable, instead of painful feelings, with the first lessons in grammar.

We do not consider the section devoted to mental arithmetic particularly useful for the purposes of education. Some curious properties of different numbers are given, and sundry excellent methods for shortening the process of mercantile calculations are shown, which, although they will not at all assist in conveying a knowledge of the science and philosophy of arithmetic, yet when once this knowledge has been acquired, might afford examples of the advantages to be derived from a clear perception of the nature of numbers,

Arithmetic is a most important branch of education, inasmuch as, properly taught, it may be made the first agent, by which the reasoning powers can be developed and exercised. The learner, who, at every step, is made clearly to see sufficient reason for his various operations, will acquire the habit of not taking anything upon trust, and of investigating for himself. It is of consequence, therefore, that this science should not be enveloped in any mystery, and that no properties of numbers should be presented to the pupil, but those which may be clearly understood by him. The satisfactory certainty in arithmetical studies forms their peculiar beauty. The *why* can always be clearly seen, and no legerdemain should be played off, to perplex, as well as astonish, the tyro.

Several properties of numbers are given in the present work, without any attempt at explanation, and many of these in a manner which would imply that there is something magical and inexplicable in the number 9.

'Would the pupil wish to see a sum in multiplication, the product of which should contain several figures, but all alike? Tell him to set down all the digits except the 8, and if he would like the product to be all ones, let the line be multiplied by one 9. \* \* And here again is the faithful number, for the product presents 9 ones.'

In like manner, to obtain a product of any other recurring figure, the line is multiplied by such a multiple of 9 as the figure required.

The examples of all the wonders of 9 closes with the following puerile passage :—

'It is evident that the number 9 is full of beauty, and the pupil may ponder on the curious effect of dismissing the 8 from its fellow figures; but although it be thus dismissed, it may claim, like its lesser brother 8, the merit of producing an important number, by multiplication into itself; for 8 times 8 are 64, and that number is a distinguished favourite with mathematicians, it being divisible by 2, or by 4, or by 8, or by 16, or by 32, or by 64, without breaking an integer. Half 64 is 32; half that is 16; half that is 8; half that is 4; half that is 2; and half that is 1; no fraction appearing in any of those divisions.'—p. 67.

Wonderful that the sixth power of 2 should be divisible by any of its lower powers without leaving a remainder!

The number 11 next appears on the stage to perform its unexplained evolutions; and, finally, the two numbers, 9 and 11, are made to astonish by a combination of their powers.

The next example given of a property of numbers is pretty and ingenious, and may amuse those who can be made to

understand the reason upon which it is grounded, but it certainly would not be advisable to show it to others who are not so far advanced. Leibnitz, it is said, was the first who remarked, that if any number of figures be set down in a line, and another line be formed of the same figures set down in any order below the others, after subtracting one line from the other, the remainder will always be divisible by 9, without leaving any fraction. For example—

$$\begin{array}{r} \begin{array}{r} 792135 \\ 219753 \\ \hline 9)572382 \\ \hline 63598 \end{array} & \begin{array}{r} 792135 \\ 573921 \\ \hline 9)218214 \\ \hline 24246 \end{array} \end{array}$$

If only three figures be used, and their places be exactly reversed, the remainder will not only be a multiple of 9, but also of 11. No attempt is made in the present work at explaining the cause of what is here put forth as an arithmetic phenomenon. The reason of it may, however, be readily shown. It is evident that any term of the geometrical series 10, 100, 1000, &c., is divisible by 9, having a remainder of 1, therefore, if any of the terms 1, 10(9+1), 100(99+1), &c., be subtracted from any other higher term of the series, the remainder will be some multiple of 9; as 1000—1, 1000—10, 1000—100. If the example given be generalized by putting  $a, b, c, \text{ &c.}$ , for the respective numbers, then  $100000a + 10000b + 1000c + 100d + 10e + f$  represent the first line. When the second line is  $100000c + 10000d + 1000b + 100a + 10f + e$ , their difference will be  $99900a + 9000b - 9900 - c0 9900d + 9e - 9f$ , which, it is evident, let  $a, b, c, \text{ &c.}$  be any numbers whatever, will always be divisible by 9, and this in whatever order they may be placed. Again, in the second case, the first line is  $100a + 10b + c$ , the second line  $100c + 10b + a$ , this difference will therefore be  $99a - 99c$ , and 99 is a multiple of 9 and 11.

This is so very simple, that it may be readily understood by children from nine to twelve years of age, who have had their minds previously awakened to the *rationale* of figures.

Mr. Smith extols much the extraordinary value of his arithmetical scales, for saving 'nearly all the time now wasted in setting and correcting sums in the four first rules, and for enabling pupils, in an amusing manner, to acquire an extraordinary ease and rapidity of calculation.' We do not entirely credit their great practical utility, save as being an amusing and rational toy.

Long 'routine sums' should never perplex or disgust the young learner, nor need the time of the master be employed

in correcting the errors of the scholars. All the four elementary rules are susceptible of proof from the converse, and it gives the pupil a salutary habit of depending on himself, to become *sure* that he is correct without any application to his instructor. The bright face with which a *proved* sum is always presented for inspection, shows that the *certainty* of being right is the greatest reward of exertion.

Quickness is not of so much consequence as correctness, and for the ordinary purposes of life, sufficient expertness will be always acquired by practice. It is of advantage in many vocations to be what is called a 'ready reckoner,' but this is quite subordinate to a proper understanding of figures; nor is it a necessary consequence that a 'quick arithmetician' should, on that account, be the better able to 'form a prompt and wise decision on important affairs through life.'

Everybody who is conversant with numbers generally finds out for himself some standard, and some practical rules which may facilitate his calculations, and it is far better that the pupil should be led to these by his own invention and management, than have them furnished to him, when most probably he will use without understanding them.

The extraordinary power of calculating with rapidity, as possessed by some few persons, may be regarded as an object of curiosity, rather than one of practical utility. We believe that the great mathematician, Euler, has been the only instance in whom this wonderful faculty has been displayed in very early youth, and continued throughout his life, combined with other rare and transcendent powers of mind.

Extraordinary calculators have, from time to time, astonished the world, with the exercise of this power of mentally combining and retaining figures; but, one by one, they have disappeared from the stage, and no superior mental excellence, evinced in after-life, has drawn them again from their obscurity. None of these prodigies have ever been able or willing to explain the process by which they accomplished their object. In the book before us an exception is, however, made in this respect, in favour of Master Noakes, who 'appeared to be as much pleased to explain, as he was to astonish his hearers by the rapidity of his calculations.' Several examples are given of his acuteness and ingenuity in simplifying his operations; and his clear manner of explaining evinces a degree of intellect very far beyond that possessed by many of his predecessors, who appeared more to resemble calculating machines, than reasoning beings.

The pupils of the Edinburgh Sessional School are described as having attained to a surprising facility in mental arithmetic:—

'Three or four of the best arithmeticians one day calculated mentally, and pronounced correct answers, in twenty minutes, to 147 questions, put to them out of a ready reckoner!'—p. 83.

This is, indeed, a startling paragraph. Mr. Smith does not profess to have been present at the miraculous performance; but he sets it down, without advancing anything against its probability. We hope that it is a misprint. Credulity itself must hesitate to admit so astounding a fact. We should regret any circumstance that would prevent our willing credence of the other statements given concerning this school.

A short sketch of a system of mnemonics concludes the volume. In this part the author does not profess to advance anything original, but his ideas on the subject are rational and judicious,—perhaps the execution does not merit equal praise.

The ordinary method of taxing the memory, in learning what is called *tasks* or rules by rote, deservedly receives Mr. Smith's strong reprobation; and were his usefulness limited to only this one particular, it would entitle him sufficiently to be placed among the zealous and enlightened who are at work in the great cause of education. In his lectures,

'He lays it down as a principle, that tasks ought never to be imposed, when the matter intended to be impressed on the memory, can be so impressed by ordinary instruction, or by reasoning on general principles. Mere tasks learnt by rote attach only to the memory, and by such tasks the memory would indeed be overburdened, if it did not relieve itself by suffering its stores to escape; that is, by forgetting the unintelligible, and, therefore, unwelcome lumber which oppressed it. Ask any well-educated person how many of those things his memory retains which were only committed to it by means of tasks; and then contrast the scantiness of his recollections of those things with the abundance and freshness of his impressions of principles and facts, in the reception of which his judgment or fancy has been engaged.'

Again :

'If persons took one-tenth of the pains in attending to general *principles*, which they employ in committing to memory, not only would their knowledge be more extensive, but their minds more active and efficient for all the various purposes of our nature.'—pp. 87, 88.

The memory must, however, be sometimes called in requisition, in cases which appear to lie within its province alone. It is useful to recollect facts chronologically, and to arrange them in due order, within the store-house of our mind; by this means clear ideas are always retained of the course of leading events—of the progress of society—and of

the contemporaneous periods of the different nations of the world. There can be little doubt that much assistance may be given to memory, even in its peculiar department, by associating with it, as an auxiliary, some other power of the mind; thus, an acquaintance with dates may be acquired with facility, and obtain a permanent place in the mind. To devise some means of affording this assistance is the business of mnemonics. It is evident then, that in arranging a system for this purpose, an association with the reason or the imagination should be obtained in the most simple and natural manner. Many words should not be crowded on the memory for the better recollection of one, and whatever words are to be remembered, in order to recall the date, should certainly comprise good sense and good English. These desiderata have rarely been found in any systems of mnemonics. The machinery has in general been too complicated and uninteresting, burdening the memory with an overpowering quantity of extraneous nonsense, which, one would imagine, required a greater effort of the memory for its retention, than the recollection of a few dates.

For these reasons, Grey's 'Memoria Technica,' however ingenious, presents insuperable objections to the general adoption of his method; and we believe there are comparatively few, who have ever, to any useful extent, availed themselves of the numerous tables found in his elaborate work.

Feinagle's System of Associations, by which, a few years back, so many fancied that they were becoming miraculously wise, is now entirely sunk into oblivion; and perhaps there is not one person among all that composed his numerous classes, who retains one distinct idea, obtained in consequence of attendance upon his lectures. In general, the artifices employed for impressing numeral facts on the mind, have not been sufficiently attractive to invite to their extensive adoption. We do not think that the sketch before us is at all calculated to obtain greater favour.

In all the systems of mnemonics, wherein words are employed, the fundamental principle is, that of making a certain number of letters symbolic of the respective figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 0. Dr. Grey assigned this office to the vowels, as well as the consonants; hence his choice of words was limited, and, in consequence, those combinations were formed of uncouth sounds, which deterred the student from attempting to make himself familiar with them.

Consonants alone are used in the system under examination; by which plan correct words may be formed. But we think that there is here a needless complication, and that the memory is called upon to make a greater effort than is ne-

cessary, for merely giving to each figure its peculiar representatives. Ten unconnected incongruous words, such as '*magi*', '*raze*', '*cook*', &c., must each, in its proper place, be associated with the different digits.

The arrangement of letters being made, it remains to combine them together in words for the formation of certain numbers to be remembered, as naturally, in as few words, and in as good language as possible, consistent with producing an association in the mind. The examples in the present work are lamentably deficient in all these particulars. For the purpose of remembering the dates of accession of each of the kings of England, two lines of—we cannot call them poetry, nor scarcely do they deserve the name of rhyme—but two lines of wretched doggrel are recommended to be committed to memory, in order to recollect the concluding word in which the date is conveyed. Better would it be never to have the mind stored with these useful dates, than to have so much accompanying useless absurdity, and thus run the risk of spoiling the pupil's taste for the beauties of poetry, in endeavouring to learn and retain such an insufferable jingle. Two specimens of these couplets will perhaps be quite sufficient to prevent the rest from being perused:—

'For no man did *Henry the Eighth* care a wisp,  
And so fat he became that he scarcely could *tisep*.  
509

'Elizabeth, ev'n when in years rather mellow,  
Conceived herself lovely, though wrinkled and *yellow*.'  
558

There is a fault in the arrangement, as well as in the execution of this system. The letters representing the figures are contained in one word, whereby the power of introducing it with propriety is very circumscribed. By causing only the initial letter of each word to form the date, a much wider scope is at once given to ingenuity in constructing an appropriate sentence.

In a small unpretending little book published a few years ago, and entitled 'A System of Chronology,' by Mrs. John Slater, this plan is practised with great advantage; while the letters are so simply associated with the numbers, that the preliminary step of learning these may, without difficulty, be acquired in five minutes. By the above method sentences are constructed, having some marked reference to the circumstance, the date of which is to be remembered. For example, the date of the death of Socrates is known by recollecting the sentence—'Rest, sage Socrates.' The period of the death of Newton is shown by the following:—

'The great <sup>1</sup>Newton <sup>2</sup>buried.' Every useful date is, through this contrivance, readily acquired by children, without being made an irksome task; indeed, it is rather a matter of amusement to them, to exercise their ingenuity in forming sentences for themselves.

We cannot close this article without expressing a sincere hope that Mr. Smith will continue to give his valuable assistance towards demolishing the pernicious systems by which education has heretofore been enslaved, and replacing them by rational and enlightened methods of expanding the youthful mind, and leading it on to the love of knowledge and virtue.

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## MISCELLANEOUS.

## SWITZERLAND.

THE JESUIT COLLEGE AT FREIBURG—A DIOCESAN VISITATION.

'Geneva, 1830.

'I made an excursion to Freiburg, in the month of June last, at the invitation of a friend here, who was going to place one of his sons in the Jesuit Seminary; and I took some pains to become acquainted with it in all its parts. Conceive a spacious edifice, forming an oblong square, with four stories above ground, and *four hundred and ninety-eight windows*; and, conceiving this, how is it possible further to conceive that it should labour under a *deficiency of light*? This stately mansion lies, like a citadel, on the highest ground in the town. On our entrance we were received by a servitor in the sable livery of his order; there was much of courtesy in his address. As soon as we had crossed the threshold, the double iron wicket behind us was instantly closed, and our cicerone delivered himself of a loud rap or two against the knocker of the door. Forthwith it was answered by two young "Jesuit Fathers," whose office it was to show strangers round the establishment. Away, then, we were hurried with almost breathless velocity through a host of broad, well-lighted, cleanly corridors; ever and anon stopping a second to recover our wind and take an admiring glance at the order and comfort which pervaded the kitchens, dining-halls, and larders; for there is not a nail or peg but what is kept as clean and perfect as in a palace. The interior is arranged with so much tact that nothing which passes can escape the observant eye. Our next visit was to the playgrounds and gardens, where the pupils were enjoying themselves right lustily: had the weather been bad they would have taken refuge in the apartments allotted for their recreation; and what, think ye, these contain? Billiard-tables, a pretty theatre, a bazaar stocked with every sort of toy and plaything; in short, nothing was wanting which youthful thirst for amusement can put in requisition. A tone of gentleness and benevolence seemed, even when the classes were under tuition, the universal order of the day; nor would it be easy for a superficial observer to detect the keen and unintermitting vigilance with which the teachers watch their pupils; not one word, or motion, or change of feature passes unheeded; the most trivial occurrence is entered into a book with scrupulous accuracy; and, with this book at his elbow, the scholar is summoned every evening to render an account of the day's occupation. Woe betide the hapless urchin who shall treat a fault with slight, or show himself ashamed to bring it out. This wakefulness is carried with so high a hand, that the very words which a boy utters in the unconsciousness of slumber are carried to book! In spite of sweet looks and honeyed words, nothing can exceed the harsh and inexorable

manner in which chastisement is inflicted. But I should not have quarrelled with this, had I not found the seminary at least two centuries behind its contemporaries in its scholarship: for, in history, its oracle is old Father Loriquet—in natural history, the Abbé Nollet—in Greek, fragments from St. Basil and St. Gregory—and in French literature, here and there a fable or some mortuary oration. As for mathematics, canon law, or philosophy, the least said the soonest mended. It would, however, be unjust not to quote the exception to the rule; they have a Flemish Abbé here, who holds the appointment of professor of chemistry and natural history, and goes by the name of the Père Physicien; and he is, indeed, the only academical functionary whose talents and acquirements do honour to the institution. So little do the generality of parents look into these matters, that there were no fewer than three hundred youths beneath its roof two years ago; and parents must not take credit for improved concern in this particular, even though the number has at present dwindled down to one hundred and thirty. Two-thirds are natives of the canton itself (Freiburg); the remainder are exotics from France, Belgium, Savoy, and the Swiss cantons; and those from the first-mentioned kingdom are, without almost one exception, from country towns. It is the practice here, and indeed in every other Jesuit school, to avoid no artifice, however degrading, which offers a chance of attaching such pupils to the Order as give evidence of a temper or of natural endowments fitted for its purposes, or are calculated, from their rank or connexions in society, to forward its interests. This was the motive which advanced young Count Stollberg to the dignity of a teacher last year.

‘On our return we fell in with the Bishop, who was coming back from inspecting his diocese. He was travelling in company with his Chancellor and a member of the Freiburg Council, whose office it is to examine the parochial registers. Every parish has to pay this “Prince of the Holy Empire,” as he styles himself, sixteen Swiss francs (about 18s.), besides half as many to the councillor, and two to the horseman *en chef*, who escorts them. The expenses of his Highness’ journey and victualling cost each parish sixty-four francs, and the sum levied on the whole canton is, therefore, no less than seven thousand one hundred and sixty-eight francs, or 130*l.* We must add to this, the military parade with which he is accompanied and greeted; the festivities, banquets, &c., which mark his progress. These matters cannot be had without a large outlay; and the charge of the whole tour could not, as I was assured, fall much short of six or seven hundred pounds.’

#### GERMANY.

LEIPZIG.—During the existing summer semester no fewer than 122 individuals, regularly admitted by the University Council, (namely 35 ordinary and 24 extraordinary professors, and 63 lecturers,) have announced their intention of giving courses: these will consist of 12 in theology, 45 in jurisprudence, 33 in physic, and

32 in philosophy. Notwithstanding this abundant supply, it is a subject of complaint that many branches of science are very scantily, and some not at all provided for.

A very useful and tolerably complete description of the past and present constitution of this University has lately appeared, under the title of 'Die Universität Leipzig in der Vergangenheit und Gegenwart von C. C. C. Gretschel.' Dresden, Hilscher, 1830.' Though the author has treated principally of the *external* condition of the University, yet this is still the best book for giving a person a knowledge of the nature of the Saxon Universities.—*Jahrbüch. Seebode.*

BONN.—The number of students who have frequented this University during the winter session 1830-1831, has been 884, exclusive of 93 foreigners.

The matriculations in Theology (Protestant) were	116
Theology (Catholic)	271
Law . . . . .	232
Medicine . . . .	134
Philosophy, &c. . . .	112
Various (but immatriculated)	19

UNIVERSITY OF JENA.—Professor Schröter was installed in the Pro-Rectorship on the 5th of February last. During his predecessor's discharge of that office, 151 students quitted the University, and 123 entered it. On the 6th of February the number present was 556, of whom

249 were students in Divinity,	
174	Jurisprudence,
71	Medicine,
62	Philosophy.

UNIVERSITY OF WURTZBURG.—We learn from an official enumeration of the officers and students of this University, which has been published for the first time during the preceding winter, that the number of students present at the commencement of the winter session 1830-1831, was 605, and of these 409 were Bavarian subjects, and the remainder foreigners, their classification being as follows:—

Theology . . . . .	159
Law . . . . .	99
Physic . . . . .	230
Philosophy . . . . .	117

On the 11th of March last died, at Pesth, *Charles von Kisfaludy*, the celebrated Hungarian poet, in his fiftieth year; and on the 20th of the same month, at Erlangen, *C. F. von Glück*, the veteran of German jurists, and professor of law to the University of Erlangen, in his sixty-sixth year. Scarcely thirty minutes before his decease, this indefatigable scholar was busy correcting his commentary on the Pandects.

## GREECE.

The 'Orphanotrophion' at Egina is one of the first establishments which have been founded by the present government; it is a spacious edifice, forming an oblong square, the principal entrance to which is from the west. It affords education to the children, whom the French government have redeemed in Egypt, as well as to the offspring of indigent parents. Its present number of pupils is about three hundred. They are instructed in the elementary branches of education, and afterwards taught the mechanical arts under some other roof. Ancient Greek forms part of the course laid down. In other spots, the government have likewise appointed as many as forty-eight professors of that language, who have 2386 pupils under their care. There are sixty-four schools, where the system of mutual instruction obtains; and they are frequented by 5418 pupils.—As a member of the French Philhellenic Society, I considered it my duty to visit several of these schools, and I am bound to notice, in an especial manner, the excellent state in which I found those of the islands of Tino, Syra, Poros, and Naxos. M. Mustoxidi, a Greek of Corfu, whose works have entitled him to the honour of being appointed a corresponding member of the French Institute, is the Ephor of the 'Orphanotrophion.' Through his zealous instrumentality, a museum has been formed in it, which contains numerous archæological remains, brought together from various parts of Greece. Independently of a considerable number of inedited inscriptions, we observed several beautiful Santorin vases, the statue of a sphynx, a variety of basso-relievos, gold jewellery, and a few bronze and terra-cotta figures.—*Gauttier d'Arc's Recollections of Greece in the year 1830.*

## IONIAN ISLANDS.

RETURN of the number of Scholars of the Ionian University, and the Secondary Schools in the United Ionian Islands, from the promulgation of the new Regulations, to the month of January, 1831.

Island.	Feb.—July, 1830.	Oct. 1830—July, 1830.	Oct. 1830—Jan. 1831.
Corfu, University .	76	60	62
— Secondary School .	75	69	81
Cephalonia, Second. Schools	89	78	77
Zante . . .	85	90	100
St. Maura . . .	76	58	52
Cerigo . . .	64	56	54
Ithaca . . .	55	45	55
Paxó . . .	43	33	38
Total .	563	489	516

The scholastic year begins October 1, and ends July 31.

RETURN of the number of Scholars in the Ionian University, and in the Preparatory School at Corfu, from their first establishment under Frederic, late Earl of Guilford, till the month of August, 1828.

Years.	Natives,			Total.	The Relations.	Public.	Maintained by	
	Of Corfu.	Of the other Islands.	Of Foreign Countries.				The late Chancellor.	Islanders. Foreigners.
1823, 4	A 14	10	16	40	23	2	7	8
	B 34	3	6	43	43	0	0	0
1824, 5	A 22	21	39	82	48	8	10	16
	B 62	26	13	101	70	28	1	2
1825, 6	A 79	70	71	220	150	27	17	26
	B 61	60	22	143	93	44	3	3
1826, 7	A 69	78	67	214	105	39	31	39
	B 94	82	34	210	159	47	3	1
1827, 8	A 44	70	65	179		46		
	B 105	58	40	203		50		

A University. b Preparatory School, 'Εφηβεῖον. The scholastic year for the University began November 15, and ended June 31; for the School, November 15, and ended August 15.

	Chairs.	Professors—Univ. Corfu.	Native of
Law	• . .	Dr. Pasquale Carusus Dr. Girolamo Santorio	Cephalonia. Naples.
Divinity	. .	Rev. Dr. Constant. Tipaldus	Cephalonia.
Moral Philosophy	.	{*Rev Deacon Neophytus Bambas}	Scio.
Greek	• .	Dr. Constantine Asopius	Greece.
Latin and Italian	.	Dr. Gaetano Grasseti	Rome.
English	.	W. Thistletonwaite, M.A.	England.
Pure Mathematics	.	†Dr. John Carandinos	Cephalonia.
Mixed Mathematics	.	†W. Thistletonwaite, M.A.	England.
Experimental Philosophy		Dr. George Therianos	Zante.
Chemistry	.	§Dr. Athanasius Polites	Sta. Maura.

There are nineteen young men in the Ecclesiastical Seminary. Two have been lately examined, and have obtained their diploma in divinity.

There is a central School in each of the islands, and two in Cephalonia, at Argostoli, and Lixuri. The master of each of the central schools inspects the village schools every three months. Slates, pencils, desks, and benches, with a few books, are supplied by the public, under certain conditions.

\* Rector of the Ecclesiastical Seminary.

† Ephorus of the University.

‡ Secretary to the Commission for Public Instruction.]

§ Inspector of the Mutual Instruction Schools.

## MUTUAL INSTRUCTION.

Islands.	Number of Schools.	Number of Scholars.
Corfu . .	23	914
Cephalonia . .	26	958
Zante . .	49	1459
Santa Maura . .	11	382
Ithaca . .	7	475
Cerigo . .	5	194
Paxo . .	4	173
Total . .	125	4555

## UNITED STATES.

PROVISION FOR SCHOOLS.—In an article on Legislative Provision for Schools, in the ‘American Annals of Education,’ of January last, it is remarked, that the modes which have been adopted in the United States for the support of schools may be reduced to three:—1st, funds; 2d, taxation; 3d, a combination of both.

Connecticut and Rhode Island have adopted the first plan. The fund of Connecticut amounts to about 1,700,000 dollars, a considerable sum for so small a state; but it is the opinion of the best judges that the actual influence of this fund is injurious. New Hampshire, Massachusetts, and Vermont, have always maintained the plan of taxation. Vermont has a small fund, but no aid has yet been afforded by it to schools. New York has combined both plans. By the last report it appears that the New York fund is 1,661,081 dollars, which is somewhat less than that of Connecticut. It is estimated that the available part of the fund pays only one-tenth of the annual expenditure on the common schools; another tenth is assessed on the taxable inhabitants of the towns respectively; and the two-tenths, thus made up, constitute what is called the school monies. Something less than two-tenths is raised by a tax on the property in the districts, and the remaining nearly six-tenths, or 600,000 dollars (the whole expense being 1,000,000 dollars), is paid by the parents and guardians of the scholars.

Since the revision of the New York common school system, which was not in full operation till 1821, the average annual increase of children between five and fifteen has been about 16,500; and the average increase of the number of scholars instructed has been about 20,000 a year for the last ten years. In 1830, the number of children between five and fifteen years of age in the districts which made returns was 468,257; while the number of children actually instructed in those districts was 480,041. During the single year 1828, 311 new school districts were formed.

Schwartz, one of the most eminent writers on education in Germany, observes, in his ‘History of Education,’ that the state of New York has the greatest number of children in its schools in proportion to the whole population of any country that he has found.

The state of Maine has a very simple plan for providing for the

schools. They have no fund whatever, but oblige every district to raise, for the purposes of education, a sum proportioned to the number of its inhabitants or its property. If a town or district neglects to do this it is liable to a fine.

The following tabular view is taken from the 'Traveller and Monthly Gazetteer,' published at Philadelphia, June 1828.

Newspapers published in the United States in the year 1775; ditto, in 1810; and newspapers and periodicals in 1828:—

States.	Number in 1775.	1810.	1828.
Maine . . . . .	" . . . . .	" . . . . .	29
Massachusetts . . . . .	7 . . . . .	32 . . . . .	78
New Hampshire . . . . .	1 . . . . .	12 . . . . .	17
Vermont . . . . .	" . . . . .	14 . . . . .	21
Rhode Island . . . . .	2 . . . . .	7 . . . . .	11
Connecticut . . . . .	4 . . . . .	11 . . . . .	26
New York . . . . .	4 . . . . .	66 . . . . .	161
Jersey . . . . .	" . . . . .	8 . . . . .	22
Pennsylvania . . . . .	9 . . . . .	71 . . . . .	185
Delaware . . . . .	" . . . . .	2 . . . . .	4
Maryland . . . . .	2 . . . . .	21 . . . . .	32
District of Columbia . . . . .	" . . . . .	6 . . . . .	9
Virginia . . . . .	2 . . . . .	23 . . . . .	34
North Carolina . . . . .	2 . . . . .	10 . . . . .	15
South Carolina . . . . .	3 . . . . .	10 . . . . .	16
Georgia . . . . .	1 . . . . .	13 . . . . .	13
Florida . . . . .	" . . . . .	1 . . . . .	2
Alabama . . . . .	" . . . . .	" . . . . .	10
Mississippi . . . . .	" . . . . .	4 . . . . .	6
Louisiana . . . . .	" . . . . .	10 . . . . .	9
Tennessee . . . . .	" . . . . .	6 . . . . .	8
Kentucky . . . . .	" . . . . .	17 . . . . .	23
Ohio . . . . .	" . . . . .	14 . . . . .	69
Indiana . . . . .	" . . . . .	" . . . . .	17
Michigan . . . . .	" . . . . .	" . . . . .	2
Illinois . . . . .	" . . . . .	" . . . . .	4
Missouri . . . . .	" . . . . .	" . . . . .	5
Arkansas . . . . .	" . . . . .	" . . . . .	1
Cherokee Nation . . . . .	" . . . . .	" . . . . .	1
Total . . . . .	37 . . . . .	358 . . . . .	827

The great majority of these are weekly papers; some, however, are published twice and thrice a week; and in the large towns of Boston, New York, Albany, Philadelphia, Baltimore, and some other places, there are daily papers, one or more. New York has twelve daily papers, and Boston four.

In the city of New York there is one French paper, and one Spanish paper, published weekly.

In the state of Pennsylvania there are twenty-two weekly newspapers in the German language, and also several German news-

papers in the state of Maryland. There are two German papers in Ohio. One daily French paper is published at New Orleans, Louisiana, besides one or two more in that language.

The Cherokee Indians (state of Georgia) have a newspaper printed in their own language, and also partly in a newly invented character.

The following extract, which we do not recommend as a model of style, contains something which is of much higher value than fine words—the results of certain experiments in education, which deserve the attention of all parents and teachers.

The *New York Evangelist* furnishes a report of the Manual Labour Academy of German Town, from which we extract the following passages:—

'The institution is in a prosperous condition. It now contains twenty-three pupils, and an accession of ten is expected at the opening of the new term. The main building has been altered so as to accommodate thirty-seven pupils, and a new workshop has been erected. The farm, also, during the last six months, has been under improvement. All the fences have been cleared of weeds and brambles; fifty loads of soil taken out from a principal drain; about one acre of wild swamp land, flooded from an accumulation of soil on the margin of a brook, which runs through it, has been drained by several ditches, so as to afford a crop of buck wheat; four acres, at the north extremity of the farm, neglected for some years, have been fallowed, cleared, and sowed with wheat; and a half acre, contiguous to the barn, has been enclosed by thirty pannels of post and rail fence, and converted into a very productive culinary garden. The institution has three officers, a principal, an assistant teacher, and a farmer. The pupils who are now in the academy differ from each other in almost every particular; their ages vary from fifteen to twenty-eight years. One is from Massachusetts, two from New York, two from New Jersey, thirteen from this state, of whom nine are from the city. Seven of the pupils are beneficiaries, nine are supported by parents or guardians, and three are dependant on their own resources. With the exception of six of them, their constitutions are good. Three have been afflicted with intermittent fevers. But the complaints common to students—the effects of the studio-sedentary habit—do not exist among them. On the contrary, one, who entered sickly, has now health and strength; another, who was so indisposed as to be unfit for labour or study, is now capable of both; and a third, who had dyspeptic attacks from study, now prosecutes it with manual labour, and enjoys good health. Fifteen of the twenty-three have the ministry professedly in view. The studies of these pupils are the same as in other academies or seminaries; but the hours of recreation are not the hours of waste and idleness, and, as it is too often, of immorality. Four hours daily, at the least, have been employed in useful bodily labour by every student. And by the profits of this labour, they have not only more or less defrayed their own expenses of

education, but have established their health and increased their strength both of body and mind, and made them rejoice in both. Their skill has been called into exercise. They are becoming dexterous, as well as intelligent and moral. The head, the heart, and the hands, are all educated, and the pupils thereby fitted for the vicissitudes of life; particularly so, if any of them be destined for our new settlements as christian missionaries, and more particularly so, since now no parent, by patrimony or influence, can secure the destiny of his son amid the turnings and overturnings of nations, and families, and individuals. A complete education is the only sure rock.

' Eighteen months ago, the plan of uniting academic studies with useful and systematic bodily labour, appeared to us as an impracticable scheme, unsanctioned by the example of old institutions of learning, and incompatible with a student's life. And now there are already ten manual labour institutions in operation throughout this country, and others about to be established. The facts which they afford demonstrate that this manual labour system—the same, indeed, which Franklin and such men personally adopted, and which was no novelty to the Persians, the Greeks, and to the Jewish people—which Paul at Corinth experienced the benefit of—is one which will also enable an entire community, and the world, to educate themselves. The health-preserving and life-saving labour of the hands, defrays the expenses of education. Youth of genius and piety, born in poverty, need far less the arm of charity to conduct them to public usefulness. Time and effort are almost all they require. Parents have less of the overreaching anxiety to accumulate means for the education of their sons: the muscles deposited in broad and numerous layers on their bones is a patrimony to each one of them for this object. And the day-labourers may be informed, that the same power which he expends in toil, is, in his boys, a receipted school-bill.'

From the 'American Annals of Education,' January 1831, we learn that similar establishments are forming in various parts of the United States; ten schools or academies of this class are in actual operation. Particular instances are mentioned in which the profits of the student's labour go far towards defraying their expenses, while their health is also improved, and their proficiency in their studies consequently accelerated.

In a climate like our own, so favourable to bodily exertion, such a plan as this modified according to circumstances would contribute most materially to the physical and moral improvement of all classes, and particularly of the wealthier, if they could be brought to adopt it.

#### JAMAICA.

**JAMAICA ITINERATING LIBRARIES.**—At the request of Mr. Samuel Brown, we publish the following extract from a letter of his on the subject of itinerating libraries:—' In the "Journal of Education," No. II., the writer of a notice on the Itinerating Libraries, appears,

as well as some other friends, to have greatly mistaken the class of persons for whose use these libraries are principally sent,—viz., the white and free-coloured population of the island, who alone can be expected to pay for the use of the books. The disposition to read has been so much excited in one part of the island, that the gentleman to whose care one of the divisions has been sent, anticipates about forty annual subscribers of one and a half dollar. This would enable me to send a new division of fifty volumes next year, as the whole subscriptions and donations, after defraying the local expenses, will be employed for this purpose.'

### RUSSIA.

DORPAT.—There are at present 580 individuals engaged in study at this university; 437 being natives of the adjoining provinces of Livonia, Estonia, and Courland, and the remainder, 143, being from other parts of Russia. They class as follows:—55 are students of divinity, 64 of jurisprudence, 252 of medicine, and 209 of the various branches of philosophy.—7th May.

GEORGIA.—On this country becoming a Russian province in 1802, the government established a school at Tiflis, which, in 1804, was changed into a foundation for the education of the nobles, from which eight pupils were to be sent yearly to the University of Moscow, to complete their studies. In 1807 it was changed into a gymnasium of four classes, and the plan of instruction was modified by General Yermoloff in 1819, so as to comprise, instead of instruction in Latin and German, the Tartaric language, which is the prevailing tongue there. He also added some branches of military instruction. The establishment contained about 300 pupils during each year, but was still only a place of education for the Georgian nobility. But in May, 1830, the government established in the province, instead of this school, one gymnasium at Tiflis, and twenty district schools. To the gymnasium, which, at its opening, received 298 pupils, there are attached exhibitions or allowances from the state, to maintain 40 pupils, children of the nobles, officers, and functionaries.—*Jahrbüch. Seebode.*

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### B R I T I S H.

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THE UNIVERSITIES—*Oxford*.—In a Convocation holden on March 26, the following Public Examiners for the ensuing year were unanimously approved of:—*In Literis Humanioribus*—Rev. the Principal of New Inn Hall; Rev. R. D. Hampden, M.A., late Fellow of Oriel College; Rev. J. Carr, M.A., Fellow of Balliol College. *In Disciplinis Mathematicis et Physicis*—Rev. the Savilian Professor of Geometry; Rev. A. P. Saunders, M.A., Student of Christ Church; Rev. R. Walker, M.A., Tutor of Wadham College. !

April 13.—A Convocation was held for the admission of Proctors

for the ensuing year; viz. the Rev. D. Veysie, M.A., Student and Senior Censor of Christ Church, as Senior Proctor; and the Rev. R. M. White, M.A., Fellow of Magdalen College, as Junior Proctor. Mr. Veysie was presented by the Very Rev. the Dean of Christ Church, and nominated for his Pro-Proctors the Rev. J. Williams and Rev. A. Short, Masters of Arts of Christ Church. Mr. White was presented by Doctor Daubeny, Vice-President of Magdalen, and nominated as his Pro-Proctors the Rev. J. Linton and F. J. Parsons, Masters of Arts of Magdalen.

*May 25.*—This being the first day of Act Term, the Rev. H. D. Harington, M.A., Fellow of Exeter College, the Rev. R. Biscoe, M.A., Student of Christ Church, and the Rev. E. Higgins, M.A. of Brasennose College, were nominated Masters of the Schools for the year ensuing.

*June 2.*—The Chancellor's and Sir Roger Newdigate's prizes were adjudged as follows. *Latin Verse*—' Numantia ;' R. Palmer, Scholar of Trinity. *English Essay*—' On the Use and Abuse of Theory ;' C. P. Eden, B.A. of Oriel. *Latin Essay*—' Quænam fuerit Oratorum Atticorum apud Populum Auctoritas ;' C. Wordsworth, B.A., Student of Christ Church. Sir Roger Newdigate's prize for *English Verse*—' The Suttees ;' P. M. Ashworth, Commoner of Wadham.

*June 9.*—The judges of the Theological Prize having awarded it to B. Harrison, B.A., Student of Christ Church, the Essay was read before the University in the Divinity School.

The following subjects are proposed for the Chancellor's Prizes for the ensuing year:—For Latin Verse—' Attila.' For an English Essay—' The Study of different Languages, as it relates to the Philosophy of the Human Mind.' For a Latin Essay—' De Stoicorum Disciplina.' Sir Roger Newdigate's Prize English Verse—' Staffa.'

*Theological Prize.*—On 'The fulness of Time' at which Christ appeared on Earth.

The names of those Candidates who are admitted by the Public Examiners into the four Classes of *Disciplineæ Mathematicæ et Physicæ*, according to the alphabetical arrangement in each Class prescribed by the statute, stand as follow:—*First Class*—T. D. Ackland, Christ Church; C. Balston, Corpus Christi College; W. Boyd, University College; R. Browne, St. John's College; A. Perkins, Oriel College; T. Sincox, Wadham College. *Second Class*—G. Kempe, Exeter College; H. Rundall, Queen's College; R. Wilson, Oriel College. *Third Class*—H. Moncrieff, New College; J. Richards, Corpus Christi College. *Fourth Class*—E. Goslen, Magdalen Hall; A. F. M'Geachy, Balliol College. *Examiners*—B. Powell, R. Walker, A. P. Saunders.

*Cambridge, March 10.*—The Chancellor's gold medals for the two best proficients in classical learning among the Commencing Bachelors of Arts were adjudged to J. Williams Blakesley, of Trinity College; and W. H. Hoare, of St. John's College.

At a congregation on March 9, a grace to the following effect unanimously passed the Senate:—

To petition the King, that if it should be His Majesty's pleasure to comply with the prayer of a petition lately presented to His Majesty, for a Charter to incorporate, under the title of "The University of London," the proprietors of an institution recently founded there for the general advancement of literature and science, a clause may be inserted, declaring that nothing in the terms of the charter is to be construed as giving a right to confer any academical distinctions designated by the same titles, or accompanied with the same privileges, as the degrees now conferred by the Universities of Oxford and Cambridge.'

*April 14.*—The following gentlemen of Trinity College were elected Scholars of that Society:—

West, Ellis, Chapman, Dobson, Hawtrey, Webster, G. Williams, Morrison, Hankinson, Lydekker, Boteler, J. H. Brown, C. J. F. Bunbury, E. H. Bunbury, Kemplay, Fowler.

*Westm. Scholars.*—Latimir, Eales, Wrottesley.

*May 28.*—The Chancellor's medal for the best English poem was adjudged to G. S. Venables, Scholar of Jesus College. Subject—'The Attempts which have been made of late years by Sea and Land to discover a North-west Passage.'

*June 1.*—At a Congregation a grace passed the Senate, to re-appoint the Syndicate to inquire whether any and what alterations can be made with advantage in the present mode of examining the candidates for mathematical honours, and to report to the Senate before the end of next term.

*Trinity College Examination, June 10.*—Alphabetical list of the first classes. *Senior Sophs*—Hamilton, Hawtrey, Heath, Webster, West. *Junior Sophs*—E. Bunbury, Boteler, Brown, Caton, Feachem, Fowler, Hankinson, Kemplay, Loder, Phelps, Wright. *Freshmen*—Birks, Donaldson, Forsyth, Gooch, E. Hoare, A. Houlton, Johnstone, Leathley, Marsh, Morison, G. P. Phillips, Pryor, Selwyn, Stevenson, W. D. Watson, Wright.

*June 17.*—Sir William Browne's gold medals of this year are adjudged as follows:—J. Hildyard, Christ College. Subjects—Greek Ode 'Granta Illustrissimo Regi Gulielmo quarto gratulatur quod in Solium Britanniae successerit.' Latin Ode, 'Magicas accingitur artes.' Greek Epigram, 'Magnas inter opes inops.' Latin Epigram, 'Prudens simplicitas.'

*Porson Prize* (for the best translation of a passage from Shakspeare into Greek verse)—G. Kennedy, St. John's College. Subject—*As You Like it.* Act II. Scene I. beginning. 'To day my Lord of Amiens and myself,' &c. And ending, 'Native dwelling-place.'

*Member's Prize for Bachelor of Arts:*—J. Spedding, Trinity. Subject—'Utrum boni plus an mali hominibus et civitatibus attulerit dicendi copia?' No second prize awarded.

*Members' Prizes for Undergraduates:*—1. W. H. Thompson, Trinity College; 2. H. Alford, Trinity College; Subject—'Utrum fides Punica ea esset quamlibet scriptores Romani?'

**LONDON UNIVERSITY.**—On Saturday the 21st of May, at a public meeting, Sir Thomas Denman, M. P., in the Chair, the following Prizes were distributed:—

JULY, 1831.

**CLASS OF MIDWIFERY.**—*Gold Medal and First Certificate*—Mr. Peter Martin, of Reigate, Surrey.—*First Silver Medal and Second Certificate*—Mr. Thomas Howitt, of Lancaster.—*Second Silver Medal and Third Certificate*—Mr. Peter Hulme Edge, of Salford, Manchester.

**CLASS OF ANATOMY.**—*Gold Medal and First Certificate*—Mr. James Long of London.—*First Silver Medal and Second Certificate*—Mr. Joseph Thompson, of Colston Bassett, Notts.—*Second Silver Medal and Third Certificate*—Mr. Richard Wakefield, of London.

**CLASS OF GENERAL ANATOMY.**—*Gold Medal and First Certificate*—Mr. Robert Gruuber Shute, of London.—*First Silver Medal and Second Certificate*—Mr. John Storar, of London.—*Second Silver Medal and Third Certificate*—Mr. John Bolton Hodgson, of Burton Latimers, Northamptonshire.

**CLASS OF THE NATURE AND TREATMENT OF DISEASES.**—*Gold Medal and First Certificate*—Mr. Thomas Eden, of Liverpool.—*First Silver Medal and Second Certificate*—Mr. Robert Docksey Goodwin, of Ashbourne, Derbyshire.—*Second Silver Medal and Third Certificate*—Mr. Peter Hulme Edge, of Salford, Manchester.

**MATERIA MEDICA AND THERAPEUTICS.**—*Gold Medal and First Certificate*—Mr. David William Nash, of Bristol.—*First Silver Medal and Second Certificate*—Mr. J. N. Hudleston, of London.—*Second Silver Medal and Third Certificate*—Mr. Frederick Edmonds, of Penzance.

**CLASS OF SURGERY.**—*Gold Medal and First Certificate*—Mr. James Long, of London.—*First Silver Medal and Second Certificate*—Mr. Joseph Thompson, of Colston Bassett, Notts.—*Second Silver Medal and Third Certificate*—Mr. David William Nash, of Bristol.

**CLASS OF CHEMISTRY.**—*Gold Medal and First Certificate*—Mr. David William Nash, of Bristol.—*First Silver Medal and Second Certificate*—Mr. Collings Mauger Carre, of Guernsey.—*Second Silver Medal and Third Certificate*—Mr. Henry Cook, of London.

**COMPARATIVE ANATOMY.**—*Gold Medal and First Certificate*—Mr. Charles Lemann, of London. *Silver Medal and Second Certificate*—Mr. Robert Garner, of the Potteries, Staffordshire.

**BOTANY.**—*The Prize and First Certificate*—Mr. Robert Marsh, of Bath.

**PHYSIOLOGY.**—*Gold Medal and First Certificate*—Mr. Henry Plank, of London.—*First Silver Medal and Second Certificate*—Mr. James Wearne, of St. Ives, Cornwall.—*Second Silver Medal and Third Certificate*—Mr. Peter Martin, of Reigate.

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**SOCIETY FOR THE DIFFUSION OF USEFUL KNOWLEDGE**—*Address of the Committee, June 4, 1831.* In making a Report of their proceedings since the 20th of May, 1830, the Committee have to state, that they have published regularly the numbers of the **LIBRARY OF USEFUL KNOWLEDGE**; of which, in pursuance of their original intention, the greater part have been Historical, eleven numbers only out of twenty-six having relation to Mathematics and the Physical Sciences. The whole number of Treatises of this

series is exactly what it ought to be in three years, being at the rate of two, without any omission, each month.

Of the LIBRARY OF ENTERTAINING KNOWLEDGE four volumes only have appeared since the date of the last Report. One cause of this is the difficulty of procuring the Engravings in time. The Committee have taken great pains to insure a more regular publication, and they confidently hope to effect it in future.

THE MAPS have been published at the regular intervals originally designed, and continue to receive from the Public the same encouragement. Lithographed copies, without the names of places, the filling up of which experience has proved to be a most useful exercise for the learner, have been published at the low price of three-pence each, and will be continued.

The Committee have completed one volume of the FARMER'S SERIES, the 'Horse,' with a Treatise on 'Draught,' in which they trust that amusement and instruction have been not unsuccessfully combined.

A Map has been published of the Heavens, divided into Six Parts, which supplies to the Students of Astronomy a source of instruction hitherto attainable only at a great expense.

In execution of the design which the Committee announced in their last Report, they have commenced the publication of a quarterly JOURNAL OF EDUCATION; and there is no undertaking, in their opinion, of more decided utility, or more precisely consonant with the views entertained by the Founders of the Society. Education, as a science, has been hitherto neglected in England, and no means seem better adapted to promote the cultivation of it, than a fair Review of the Books used in teaching; together with faithful accounts of the various place of Education in the world, and notices of the new and improved methods of acquiring knowledge. The two Numbers of the Journal already published offer an assurance that these objects can be most satisfactorily attained.

The pledge given by the Committee, in their last Report, of preparing Treatises on the Science of Political Economy, has been as yet only very partially redeemed.

A Treatise on Commerce is now in the press; and the Committee cannot refer without pleasure to the occasional Treatises published by them on this subject, 'RESULTS OF MACHINERY,' and the 'Address to Labourers.' The rapid sale of the former, and the unanimous approbation it has received, have induced the Committee to undertake a series of works in the same form and style, which will comprise—

Rights of Industry.

Rights of Property.

Division of Employments.

Exchanges, or Equivalents.

Population (including Poor Laws).

Private Consumption (including Benefit Societies and Savings' Banks).

Public Consumption (including Taxation).

Of the **ADDRESS TO LABOURERS**, which was published to meet a sudden emergency, the organization of the Society enabled them in a few days to prepare, publish, and circulate 20,000 copies through the most useful channels, followed by a sale of more than 12,000 copies besides.

The Second Part of the Working Man's Companion, **COTTAGE EVENINGS**, fulfils the promise made in the last Report, of supplying a useful and amusing publication fitted for those whose previous learning does not extend beyond the faculty of reading. This work will be continued quarterly.

While the Committee express their satisfaction that the Stationer's Company should have adopted in the Englishman's Almanack many of the improvements of the **BRITISH ALMANACK**, they regret that it still gives currency to Moore's Almanack, with all its absurd and mischievous delusions, its astrological and meteorological predictions, its hieroglyphical prophecies, and its enumeration of the parts of the human frame which fall at intervals\* 'under the dominion of the Moon' For instance †: 'At this Ingress the situation of ♂ (Mars) is rather remarkable, for he is not only Lord of the *Imum Cæli*; but also in his own domal dignity, the ascendant of *England*. Hence, when we consider the nature of this anarctic promittor, with his position in the horoscope, as regards the other infortunes, it may be inferred that something of an hostile nature is thereby pointed out. And as the ascendant of *Portugal, France, and Germany*, behold the celestial combatants by an unfavourable aspect, augments the danger to these and other places and countries under the fiery trigon by stirring up conspiracies.' The following sentence may be deemed worse than nonsense ‡: 'Be not drawn aside, courteous Reader, by any of the new-fangled inter preters of prophecy concerning the coming of our Lord to reign on earth *literally* with his Saints. 'Tis all a hum, as they understand it.'

The happy effects of the plan of rendering good books generally accessible by their cheapness, have suggested the propriety of extending the sphere of the Society's exertion. The Fine Arts in this country have, till within a few years past, been the exclusive recreation of those who could afford to pay a high price for the gratification of their taste. England had no National Gallery, and Engravings were so dear as to be within the reach of comparatively few persons. A taste for the Fine Arts was consequently rare, and specimens of Painting and Sculpture, displaying an almost barbarous rudeness, were to be found in houses far removed from poverty. Recently this defect has been partially but still very imperfectly removed. The high price of Engravings is artificially kept up, and the Committee have conceived that they may render a useful and acceptable service to the public, by superintending the preparation of a series of Engravings from the portraits of celebrated men, to be accompanied with short biographical notices, four of which, of the size of Lodge's portraits, and as carefully executed,

\* Moore's Almanack, 1831, p. 26.      † Ditto, p. 45.      ‡ Ditto, p. 11.

will be sold for about two shillings and sixpence. It is in contemplation afterwards to publish Engravings from celebrated Paintings, with notices of the artists and the particular work.

The Committee most thankfully acknowledge the assistance which they have derived in various instances from their colleagues in the country, and are happy to state, that in the United States, Paris, the Ionian Islands, and in Norway, they have efficient and zealous correspondents.

The exertions of the Society are still in many respects restricted by the narrowness of their funds. The profit on each of their publications is small, and although care is taken to avoid, as much as possible, all risk by them, the Committee are reluctant to throw on the publishers the chance of loss which may be incurred by works unquestionably useful, but of which the sale may be slow, and ultimately insufficient to repay the expenses. Indeed these considerations have in some instances prevented the Committee from undertaking works, and in others may oblige them to relinquish those already undertaken.

THOMAS COATES, Secretary.

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NAVAL SCHOOL.—A want having been long felt by the officers in the Navy of a proper establishment for the education of their sons, with a view to their qualifying them for the naval profession, the requisite instruction being only to be obtained at present at an expense quite beyond the means of the majority, Capt. Dickson, R.N., directed his attention to the possibility of removing the difficulties, and at length, having matured the prospectus of a comprehensive arrangement, by which 200 boys might receive, on easy terms, the advantages of a highly liberal, as well as scientific, education, a preliminary meeting was held on the 29th of April, 1831, the late Sir Joseph Yorke, K. C. B., in the chair, at which several resolutions were passed declaratory of the objects of the meeting, and appointing another meeting for the 14th of June. Accordingly, on that day a second meeting was held, at which Captain Dickson read a report of the proceedings of the Committee, detailing the very warm and general support the plan had received; and he concluded with moving a series of resolutions, of which the first went to state the satisfaction with which the meeting had received the report; the second, the determination of the meeting to adopt the necessary means for raising the requisite funds to support the institution; the third, a proposal that the head master of the school be a clergyman of the Church of England, and a graduate of one of the English universities; the fourth, the necessity of appointing a provisional committee; the fifth, the names of the officers to form that committee; and the last, the thanks of the meeting to His Most Gracious Majesty for the patronage, which he had announced his intention to bestow on this institution.

In the course of the proceedings it was stated that 12,000*l.* would be required for the expenses of erecting a building, toward which 2500*l.* had been subscribed in 25*l.* shares. The annual expense for education and board was estimated at only 24*l.* per year,

and on the accuracy of this estimate being questioned, Captain Dickson read the following extract from a letter which he had received from the Rev. Andrew Reid, the Secretary to the London Orphan Asylum for the Reception of Children whose parents had been in respectable circumstances. The extract was as follows :—  
 ‘The object to which you and your friends are looking is a most excellent one, and only requires ordinary prudence and perseverance to accomplish. All that you propose may be fully realized for 23*l.* per child, and the benefits you will confer will be equal to any education which you can obtain at other schools for from 60*l.* to 80*l.* per annum. I state this from what has actually been done in the London Orphan Asylum; our school thrives, the children are happy with us, receive an excellent education, and readily find situations through the friends of the institution on leaving, even without portions; and our costs are less than I have named.’

After some further discussion as to the best mode of forwarding the objects of the institution, the meeting separated.

**STATISTICS OF CAMBERWELL.**—The following statistical account of Camberwell has been sent us by Mr. Saunders: we shall be glad to receive similar reports from other quarters, if they be as minute and exact as the present.

Camberwell, so called (not the parish): by the census of 1821, the population of the parish was 3058 families, 17,876 souls; adding supposed increase at 50 per cent. is now 26,806.

The district now referred to contains 1462 houses inhabited by the poor; the whole number of houses inhabited by the same class in the parish is 2419; the poor population in the district is, therefore, about 8500; and the total population, supposing the poor to be equally distributed through the parish, 16,000.

The population in the following years was respectively—in 1789, 3763; 1801, 7059; 1811, 11,309; 1821, 17,876. Extent three-fourths of a mile square.

a. Nothing.

b. Edward Wilson’s Grammar School, founded as per Letters Patent, dated 29th September, 1615.—‘A School-house and divers other houses, and buildings, and lands, by estimation seven acres.’ Children to be able, on their admission, to read English well, and write legibly—to write as specimen, John xvii. 8; to be taught long-bow, chess, leaping, running, wrestling; to have prayers morning and evening; to pay five shillings and threepence per quarter, and receive rewards of twopence, fourpence, sixpence, and one shilling, according to merit.

The pedagogue to be Master in Arts, and able to make Latin and Greek verses, pious, teaching good literature and manners—during founder’s life, salary to be ten pounds per year, afterwards to receive rents and endowments, and to be at liberty to take children of ‘subsidy men.’ The present master keeps a private school, besides receiving twelve boys on the Foundation, who each pay one guinea per quarter.

Governors—**Vicar and Warden of Camberwell**, Vicar of Carshalton, Rector of Lambeth, Rector of Newington, Rector of St. Olave's, Camberwell. J. and B. Bowver, and Scott.

**2. COLLEGE OF GOD'S GIFT**, Dulwich, founded by Edward Allen, 1619, consists of

<b>Master warden</b> —to be of the name of Alleyn or Allen.	One to perform divine worship. One Schoolmaster. One Usher. One Clerk ( <i>Janitor</i> ). Unmarried.
<b>Four Fellows.</b>	
<b>Unmarried.</b>	

Six Brethren.      } One Organist (Layman.)  
Six Sisters.        } Sixty years of age.  
Twelve Scholars, boys, six to eight years old at admission; educated until eighteen, and then apprenticed or sent to college, where there are always to be

### **Thirty Out-members.**

On death of master, the warden to succeed him.

**Warden and fellows to be chosen by lot.**

**Governors—Churchwardens of St. Botolph, Bishopsgate;**

St. Saviour;

" St. Giles, Cripplegate.

**Archbishop of Canterbury, visiter.**

In 1808 the rents were 3784*l.* per annum, and 5600*l.* had accumulated as a building fund.

c. None.

*d. GREEN COAT SCHOOL*—founded by P. Cornelison, 1721. A National School attached now contains 173 boys, 86 girls, of whom are clothed . . . . . 50 " 30 "

2. Day and Sunday Schools connected with an Episcopal Chapel containing 100 boys and 82 girls, of whom are clothed 35 boys from funds, subscription; 20 girls from the funds, and 6 from a penny a week subscription.

3. National School, St. George's, 1825; 176 boys, 140 girls.  
None clothed.

**4. British and Foreign Schools, 1812, boys only, containing 60.  
Each boy paying twopence per week.**

#### **5. Green's Row, for 20 girls, 1890.**

**6. South Street, 30 girls.**

All the above managed by Committees.

THE LITERATURE OF THE AMERICAN REVOLUTION.

<b>Gratuitous Teachers.</b>	Albany Road, Bowyer Lane, . . . . 1811, 70 Boys 60 Girls. Denmark Place, and } 1825, 122 , , 88 , , Cottage Green, Grove Chapel . . . . 1820, (14 clothed) 25 ,
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**g. INFANT SCHOOL**, 1827, Bowyer Lane, 110 pay 1d. per week  
\_\_\_\_\_, 1829, Edmund Street, 120 " 1d. "

**h. SURREY LITERARY INSTITUTION, 1826, Reading Room, Library, and Lectures, 150 Members.**

Several private reading or book societies.

All the above supported by subscriptions, except otherwise specified.

The letters *a*, *b*, *c*, &c., refer to the heads of inquiry printed in No. I. of the JOURNAL, p. 7.

**PETERBOROUGH SOCIETY FOR GENERAL IMPROVEMENT.**—A society has been established at Peterborough, for ‘The General Improvement of the Intellectual Powers, the Promoting a Love of Literature, and the Diffusion of Useful Knowledge,’ and embracing in its objects the discussion of historical and literary questions, and the formation of an extensive library. Some of the members, also it is stated, will make occasional contributions of papers, in order to form a collection of manuscripts illustrative of the history and antiquities of Peterborough and its neighbourhood, and other compositions of a miscellaneous nature. The society already includes a numerous list of highly respectable members.

#### SCOTLAND.

**DR. BELL'S DONATION.**—It is stated in the *Fife Herald* of the 26th of May, that the Rev. Dr. Bell, so well known as the founder of the Madras system of instruction, has just given the sum of 120,000*l.* three per cent. stock, for the establishment of a seminary of education in his native city of St. Andrew's. The gentlemen entrusted with the management of this magnificent donation are stated to be William Haig, Esq., Provost, the Rev. Drs. Haldane and Baird, the two ministers of the city, and Andrew Alexander, Esq., Professor of Greek in the United College. In addition to the above gift, Dr. Bell has also made over to the abovenamed gentlemen a piece of ground which he had purchased from the town of St. Andrew's for the sum of 1100*l.*, intended to form the site of the schools which it is his desire to have erected.

**EDUCATION IN THE HIGHLANDS.**—According to the last annual Report of the Society for the Education of the Poor in the Highlands, read at the general meeting held at Inverness in October last, and recently published, the schools in their connection are rapidly dispelling the ignorance which has long prevailed in those districts, and are effecting a salutary change in the moral habits of the inhabitants. The number of schools is stated to amount to 511; and they are attended by 37,000 scholars.

**FINE ARTS.**—A society has recently been established at Paisley, in order to diffuse a taste for, and promote the progress of the Fine Arts. The first object of the society was to procure materials for an exhibition of the works of living artists; and especially to foster native talent. In this they have been successful; and an exhibition of more than two hundred pictures, many of very considerable merit, was opened in May last, and has been very fully attended.

THE  
QUARTERLY  
JOURNAL OF EDUCATION.

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EDUCATION AMONG THE WALDENSES.

THE Waldenses, ancestors of the modern Vaudois, were the first people in Europe who, persuaded by their pastors, made regulations, as a community, for public instruction, and who provided that children of every degree should be taught the elementary branches of education. For many ages before the memorable enactment by the Scotch Parliament in 1494, which ordered that the barons and substantial freeholders should send their sons to school, the Waldenses had taken care that the child of the simplest goatherd or swineherd might have access to some school, free of expense. They took the lead in this grand movement, and recommended it by their example, not as an act of charity to be performed by benevolent individuals, but as a duty imperative upon the body at large to contribute towards public instruction.

And who were these Waldenses, who could see their way clearly through the dark and middle ages, and agree upon the expediency of a measure, the advantages of which are only now beginning to be generally admitted? They were inhabitants of three Alpine valleys, in Piemont, and therefore called Vallesi, or 'Men of the Valleys,' by corruption, Waldenses; and they first came into notice by refusing to acknowledge the jurisdiction of the Bishops of Rome, when all the rest of Christendom was submitting to the Papal yoke. Another thing has given them notoriety; they have continued to assert, from time immemorial (and their adversaries could never show the contrary), that they are a pure branch of the primitive church, and that they have never departed from the essential forms and faith of apostolical Christianity. They are the same of whom Sir James Mackintosh makes honourable mention in his History of England. 'With the dawn of history,' says he, 'we discover some simple Christians in the valleys of the Alps, where they still exist under the name of the Vaudois, who, by the light of the New Testament, saw the extraordinary

contrast between the purity of primitive times and the vices of the gorgeous and imperial hierarchy by which they were surrounded.'

In singular consistency with their claims to be considered a surviving branch of the primitive church, they alone, of all Christian societies, have honoured in uninterrupted observance the wisdom of the early Christian churches, which proclaimed it to be a bounden duty to provide, by authority, for the elementary instruction of youth of every class. 'Not only do the rich,' said a Christian writer\* of the second century, 'learn philosophy, but our poor also enjoy the advantages of instruction gratis.'

The early history of the Waldenses, after their reception of Christianity, like that of all the Alpine tribes of Italy, is wrapt in too much obscurity to enable us to state what was the exact system of education adopted by them in the dark and middle ages; but we can discover traces of a systematic mode of conveying information to their young people at large for seven or eight centuries back. A curious Waldensian treatise, written in the year 1100, is still extant, which shows the ingenious expedients to which the Vaudois of that day had recourse for the purpose of storing the minds of their youth with useful knowledge. It is composed in a popular style, and arranged in metrical and jingling lines; and it not only contains a brief view of the Old and New Testament history, but also of the grounds upon which the Waldenses declared themselves non-conformists with the Latin Church. This treatise is entitled 'The Noble Lesson;' and a noble lesson it is, for it is interwoven with some admirable exhortations to piety and constancy in the faith of their forefathers, and by its familiar illustrations and poetical character it is easily committed to memory. A bundle of MSS., of the same date as this composition of the year 1100, was entrusted to the custody of the Cambridge University Library, by Sir Samuel Morland, in August 1658, after his return from the Valleys of Piemont, whither he had gone on a mission from Cromwell, under the hope of obtaining favourable conditions for the Waldenses from their sovereign, the Duke of Savoy. In this collection of old MSS. there was a Latin Grammar of the ancient *Barbes* (the Waldensian clergy were so called), a treatise on Arithmetic, and treatises 'on the Instruction of Youth,' and 'on the Ancient Discipline of Youth.' Unfortunately these precious MSS. have been removed from the library where they were deposited, nobody at Cambridge knows how or when; and

\* Tatian.

as the collection presented by Morland contained all the relics of ancient Waldensian literature which could be saved during the frightful massacre and spoliation of 1655, we have little chance of throwing any light upon the systems, which the titles of these treatises prove to have been pursued in the Valleys seven hundred and thirty years ago, and most probably at a much more remote period.

We have, however, the direct witness of their enemies as to the effects of that system; and we can produce evidence, that when the rest of the common people of Europe were in a state of the most lamentable mental darkness, the young shepherd boys and all the peasant children of the Waldenses were well instructed.

Bernard of Clairvaux, the Fenelon of the twelfth century, has left it on his pages, not with a mark of admiration, but with a sneer, that a parcel of *rustics and laymen*\*, who are thoroughly contemptible in all respects, had been taught to argue with their betters upon topics with which they had no business to intermeddle. Another Romish author, Reiner, whose book was written about the year 1230, vented his indignation, at an heretical community affecting to be reformers in religion and promoters of general education, in some such burst of grief as this: ‘Would you believe it, they (the Waldenses) have schools every where; they have forty in one place, and they have forty-two in another. They have translated the Old and New Testament into their vulgar tongue, and so teach them to their children. Why, I myself have examined a clown who could repeat the Book of Job by heart, and I have seen others who were perfectly acquainted with the whole of the New Testament! ’

In a paper of secret directions given to the Dominican Inquisitors, who were to interrogate persons accused of the Waldensian heresy, towards the end of the thirteenth century, the following extraordinary testimony appears to the efficiency of the system promoted by the Waldenses. ‘ You must not question them in matters of learning, or out of the Scriptures; for if you do, you will find them too much for you.’ We give this upon the authority of Muratori †.

The impartial and honest Thuanus, though opposed to them in religious opinions, makes mention of the excellent instruction received by the young Waldenses of the lowest

\* Another proof of connexion between the Primitive and Waldensian churches, and of the immemorial separation between the latter and that of Rome. The Romish clergy from the first have been jealous monopolizers of learning, and anxious to confine it to their own purposes; the Primitive and Waldensian clergy, instead of limiting knowledge, have found it to be to their interest to spread it.

† *Dissert. 60.*

grade in life, in a tone which does credit to his good sense and kindly feelings. ‘It is astonishing that persons, externally so rude and unrefined, should have had so much moral cultivation. You can scarcely find a boy among them, who cannot give you an intelligible account of the faith they profess.’ This was written of them about the year 1590. The same historian relates an anecdote applicable to a much earlier period,—at least a hundred years before. A young theological student, full of personal vanity and of proselyting zeal, determined to go among the Waldenses, and to convert them to the faith of the Vatican. He returned to his University, and candidly declared, that he had learnt more of religion, by listening to the answers of Vaudois children, while they were being catechized, than in all the learned disputationes he had ever heard.

With such testimonies from their adversaries, it is to be deeply lamented, that the ravages of persecution have spared none of the documents, which would have enabled us to describe the system by which a whole population of rustics and mountaineers were thus educated by the public consent, and at the public charge.

To produce salutary effects by education, the persons in whose hands education is placed, must themselves be well trained in some college, or *normal* establishment. Tradition and history speak of a college in the mountain recesses of Angrogna, where the most learned of the Waldensian barbes presided. The deep rocky glen, where the college is said to have had its location, is still pointed out by the natives of the valleys, as a place consecrated to the most hallowed recollections; but not a vestige remains of hall or grotto, which can be confidently pronounced to be the site of that venerable institution. Its destruction must be assigned to a very distant date, for it was stipulated in a treaty with Henry the Fourth of France, when that monarch took possession of Piemont, after a successful war with the Duke of Savoy in 1592,—that Henry ‘should found, erect, and maintain a college for the instruction of the youth of the Valleys.’ The Waldenses would not have made such a stipulation, had their ancient college of Angrogna been then in existence; but had one stone remained above another, they would have asked for the restoration of the old, and not for the foundation of a new institution.

The only insight (and that is merely an unsatisfactory glance) to be obtained into the method of general instruction which was prevailing among the Waldenses in the sixteenth century, is afforded by one of the MSS. of the Morland

collection, which is still preserved in the Cambridge Library. This MS. is entitled ‘*Historia breve degl’ affari dei Valdesi delle Valli*,’ and dated 1587. It states, that the barbes of the valleys, besides officiating in the work of the ministry, took upon themselves the discipline and instruction of youth, especially those intended for the pastoral charge, and taught grammar, logic, moral philosophy, and divinity; and that they also devoted themselves to the study of physic and surgery, and to the mechanical arts. The same MS. adds, that in times of persecution these barbes held their meetings in secret, and preached to the people on the tops of the mountains.

A little more light breaks in upon this interesting page of history from the records of the seventeenth century. Leger, the Vaudois historian, and moderator of the Waldensian church, who was born in 1615, and was descended from a line of ancestors who had been pastors in the valleys for four hundred years, published his ‘*Histoire des Eglises Vaudoises*,’ at Leyden in 1669, after having been driven into exile by the Duke of Savoy. In this work, he has made express mention of the provision which was made for public instruction, and he speaks of it, not as something new, but as a regulation of old standing. ‘All the communes are obliged to have a sufficient number of schools under proper rules, where they teach the elements of religion; but as there is very little commerce in this country, no great pains are taken to teach writing; and there are very few, even of those who can read well, and are thoroughly instructed in the scriptures, who can write more than their names. There is also one common school, maintained by the valleys in general, to which they send the more promising youth, and where they select in succession those who are intended for holy orders; these are taught philosophy, so that none are under the necessity of going to pursue their studies at any foreign college.’ If we compare this statement with the Act of 1696, by which every parish in Scotland was to have *one* school, we shall find how much the Waldenses were in the advance, who had long before enacted that every commune or parish should not only have one school, but a sufficient number of schools, according to its population and locality.

But what renders all this the more extraordinary and the more praiseworthy is, that this plan of general education originated with the good sense and generous spirit of the people themselves, and not with the foresight or benevolence of the government under which they lived. Nay, it was not even with the approbation or the consent of their rulers.

On the contrary, it has often been in defiance of prohibitions, and in the midst of poverty and oppression, that the Waldenses have persisted in supplying their entire population with the means of acquiring elementary knowledge. These mountaineers have always asserted their religious freedom, although they have not been politically independent for many hundred years; and, considering how many attacks have been made upon them by the arm of despotic power, it must be a perfect enigma to those who do not ascribe their preservation to the interposition of an especial Providence, to account for the conservative principle upon which they have continued to shine, like one solitary star in a clouded sky. The Dukes of Savoy obtained the principality of Piemont in the eleventh or twelfth century, and finding the inhabitants of three valleys, which constitute the Waldensian territory, to be an intelligent, industrious, and brave community, who were in possession of the mountain passes and natural bulwarks of the country, they made compacts with them, and engaged, under the most solemn promises, and in return for their allegiance, to respect their personal and religious rights. For a time these compacts were faithfully observed, but when the attention of the Bishops of Rome was directed towards a handful of herdsmen and tillers of the ground, who disputed their spiritual jurisdiction, those jealous pontiffs contrived to sow discord between the 'Men of the Valleys' and their sovereigns, and to persuade the latter to force their recusant subjects into conformity with the Latin Church. These struggles frequently ended in compunction on the part of the Dukes of Savoy at having ill-treated the most loyal of their liegemen, and in public recognitions of their privileges. Some curious decrees of this sort are to be found in the 'Raccolta degl' Editti' of the Court of Turin. One, dated 10th January, 1561, runs thus: 'Be it known, that we have investigated the privileges, immunities, concessions, and exceptions, made and confirmed by our most illustrious and most excellent ancestors, in favour of our dearly beloved and faithful subjects, the Men of the Valleys, and that we are pleased to ratify and approve of them, and do hereby ratify and approve of them.'—Signed, 'Em. Filibert.'

Another, of the year 1585, recites some of the compacts previously made: 'A petition having been presented to us on the part of the Inhabitants of the Valleys, praying us to ratify and approve the privileges recognized by our most illustrious ancestors, especially those by Duke Louis, in 1448 and again in 1452; by Duke Amadée, in 1466; by the Duchess Violante, in 1477; by Duke Filibert, in 1499;

by Duke Charles, in 1509 ; and by Duke Filibert, in 1561 ; by this present act we confirm, seal, and approve of the same.'—Signed, 'Carlo Emmanuel.'

One of the most extraordinary of these documents is that dated 12th June, 1602, which assigns the reason why the reigning sovereign tolerated the non-conformists of the Three Valleys, sorely against his princely will, while he was determined to eradicate heresy out of the rest of his dominions. 'We having by all the means in our power, and in the service of God, contributed to the extermination of heresy for the safety of souls and for our own private satisfaction, yet have not been able to root it out of the Valleys under our dominion, because we are bound to tolerate it there,'—'dove siamo stati astretti tolerarli.'

But in violation of compacts thus repeatedly, and solemnly, and publicly recognized, the House of Savoy resolved to leave no means untried to eradicate principles which were known to be fatal to the assumption of absolute authority in church or state ; it was for this reason that the most rigorous hostility was declared against the system of education which the Waldenses pursued ; and while the churches and pastors of the Valleys were tolerated, the schools and schoolmasters were denounced from time to time with unmitigated severity.

'We forbid,' says the edict of the 25th of February, 1602, which proclaimed a continuation of 'gracious concessions' to the heretical congregations of the Valleys of Luserna, Martino, and Perosa : 'We forbid any heretic to hold any school, either private or public, in any part of our dominions whatever, under pain of death.' In 1624, and in 1632, this edict was renewed,—a pretty good proof that the schools of the Waldenses were regarded as effective and formidable engines for diffusing truth and knowledge. But notwithstanding all that was done to dry up these fountains, they continued to pour out their floods of pure water and to fertilize the land.

We have shown, with assistance of the extract from Leger, not only that every commune had as many parochial schools as were necessary for public instruction, but also that there was one common seminary of a superior description maintained, by order of Synod, at the public cost of the community. At length, however, persecution and oppression so impoverished the Waldenses, that they were obliged to accept foreign bounty for the maintenance of their schools. Cromwell, out of a collection raised in England, in 1655, directed 20*l.* a-year to be paid towards the support of the master of the principal school, and 69*l.* to be divided annually among thirteen of the parish schoolmasters. This grant was

withheld at the Restoration of Charles II. But after Queen Mary and Queen Anne had made some liberal gifts in aid of the Education Fund in the Valleys, the Walloon Churches of Holland undertook to remit a yearly contribution towards the public instruction of the Protestants of Piemont. This has been so regularly and generously continued to the present day, that, at the time we are now writing, the Waldenses have one grammar school, fifteen communal or central schools, and one hundred and twelve hamlet schools, open for the gratuitous admission of scholars. The sum applicable to education, and received from Holland, amounts to about 4000 francs a-year, or 160*l.*

Before we proceed to explain the nature of the instruction given in these schools, we will make a few observations upon the beneficial effects which have resulted from this perseverance of the Waldenses in having a well-instructed population. We might bring witnesses during a series of seven hundred years in evidence of the fact, that these educated 'boors and clowns' have uniformly been the most industrious and contented, the most religious, moral, humane, and loyal people of any nation of which history has made mention.

The 'Noble Lesson' composed in 1100, informs us, that in that age of ignorance and crime, when a man would systematically and consistently abstain from the common practices of the vicious, and refuse to join in the excesses of his companions, he was called in derision a *Waldensian*.

Bernard and Reiner, who have already been cited in testimony of the educated condition of our peasants of the Valleys, acknowledged, while they inveighed against their heretical opinions, that they were unimpeachable in their morals. 'They lie under no imputations of immorality,' said the latter; 'we have no fault to find with them, except on account of their creed, and we charge them with no other crime than that of blasphemy against the Church of Rome.' Paradin, who wrote his Annals in 1556, and brought them down to 1482, affirms, to their credit, that he had searched every history, but could find no stain attached to their character. Louis XII. of France, when he was urged to inflict some severities upon the Waldenses, swore with a tremendous oath, that he had reason to believe that they were the best people in all his dominions. And when one of the most bigoted of the Dukes of Savoy vowed that he would tolerate them no longer, his fury was appeased by a prudent minister, who asked his Highness where he would find any but the Waldenses to cultivate their sterile mountains, and to pay taxes with so much regularity. Thuanus, among other beautiful anecdotes

in proof of Waldensian virtue, relates that their Roman Catholic neighbours would frequently send their daughters to the Valleys, that their chastity might be secured ; and that throughout the whole of Piemont the well-instructed natives of the Valleys were preferred as servants and labourers, so little did their knowledge tend to make them idle or dissatisfied with their condition. The same historian assures us that no Waldensian was ever known to go to law with one of his own community before the sixteenth century, and that the first litigant was a young man who had been educated at Turin. The sufferings of the Waldenses under persecution is not the subject that we wish to introduce here, unless for the purpose of illustrating their moral character. We could produce more than a hundred edicts which have been fulminated against them, and we could tell tales of horrible cruelties inflicted upon such as refused to conform ; but we do not know of a single decree which charges them with crime, nor have we ever seen any authentic account of their having committed barbarities in retaliation.

Such, during the most turbulent periods, was the true character of a race of peasants, who were humanized by education, and such they are now—worthy successors of those primitive Christians of the second century, of whom it was said, ‘ They do not merely commit good precepts to memory, but they show forth good deeds : when struck, they strike not again ; when robbed, they have not recourse to law ; they give to those who ask, and love their neighbours as themselves.’ Well might a living traveller \* report of them, after having spent several weeks in the Valleys, ‘ Of truth it may be said, that in principles, habits, and manners, they approach more nearly to the primitive professors of Christianity than any other community now existing.’

The system of elementary instruction, which has been working so well for many hundred years among the Waldenses, is now in active operation under the following provisions :—

I. Each commune or parish, of which there are fifteen in number, has what we will call its great school, situated in some central spot, to which all the children of the parish may conveniently repair in fine weather, and which is open during ten months in the year. The masters of these schools, called regents, receive stipends, which vary from 130 to 400 francs each, according to the resources of the commune ; these stipends being furnished partly by contributions from Holland, and partly by parochial assessments. They have also

\* Mr. Bridge.

dwelling-houses attached to the school, which are kept in repair by the commune, and small plots of ground. The children pay nothing. The regents are required to teach reading and spelling, the elements of religion, writing, arithmetic, and *French*. French is taught because the Waldenses cannot procure any religious books in the Italian language, or in the vernacular dialect of the province. Imagine the difficulties which the poor children have to encounter. All their knowledge must be derived through the medium of a foreign tongue, but which, by the way, the pastors are wisely endeavouring to encourage as the colloquial language of the people, and ere long they will speak nothing but French. Next, the poverty of their parents cannot supply the learners with a sufficient quantity of books, slates, or paper; and the consequence is, that books are torn up and divided by leaves among the scholars; copies are written on scraps of paper; rules of arithmetic and grammar are learnt by means of recitation, and many a boy who has made some advance, must stop till his father can furnish him with materials for further progress. Add to this, that the attendance of the children is much interrupted by the necessity of employing them in the fields and mountain pasturages, and, what is worse, the Sardinian government throws every impediment in the way of education, by prohibiting mutual instruction, and any method which resembles the Madras or Lancasterian system. So lately as 1826, the king issued an order forbidding the Waldenses to have any *committees* of public instruction.

But in spite of all these hindrances, the Waldensian youth of the poorest order succeed in picking up more than a smattering of useful learning, and there are very few children of a proper age who are not in the course of education. Several communes could be named in which there is not a single child of seven years old who is uninstructed.

II. In countries like that of which we are speaking, there are many weeks in the year, when stormy weather, deep snows, and swollen torrents cut off all communication between the main village, where the great school is situated, and many of the peasants' dwellings on the mountain sides. Against this the Waldensian community has made provision. Committees of public instruction are denounced; but in the spirit of a national society for the diffusion of useful knowledge, they have anticipated all obstacles, and have taken care to have schools not only in every one of the fifteen principal villages, but almost in every hamlet. These hamlet schools are open during the winter months upon the same

principle and under the same general regulations as the central schools ; and when the children cannot reach the latter, they can attend the former. Some of the masters of these smaller schools receive less than 24 francs for their services, and none more than 50, whether their labours extend through three, four, or five months.

The population of the three valleys may amount to twenty thousand souls ; and under the supposition that there are never less than eighty-five hamlet schools open in the course of the year, and fifteen central schools, there is one school to two hundred souls. Last year 4500 children were under instruction in these institutions.

III. Until the London Vaudois Committee undertook to improve the condition of female education in the Valleys, the boys and girls mixed together indiscriminately in the central and hamlet schools ; but since the year 1824, eight girls' schools have been founded by the Committee, or by individuals, and mistresses with salaries of about three hundred francs, or twelve pounds a year each, have been appointed to conduct female education upon principles which are likely to make good servants and provident housewives, and to train them to habits of industry and neatness.

IV. The Latin or Grammar School.—This is at present entirely supported by contributions from Holland. About seven hundred francs are remitted yearly to the Valleys, for the express object of enabling a master to open a school, ‘ pour les plus beaux esprits.’ But as no further assistance is rendered to make this office effective, few are the ‘ beaux esprits’ who can leave their homes, and reside at La Torre, where the Latin schoolmaster performs his functions. The consequence is, that the attendance rarely exceeds twenty-four, and these belong principally to the adjoining villages. They come to La Torre in the morning, bring their dinners with them, and return home in the evening. The present master discharges his duties with great zeal and assiduity, and has brought his scholars forward in Latin, Greek, and geography, in a manner extremely creditable both to himself and to them. But though he would willingly receive boarders at twenty francs a month, including all expenses, he has not more than two or three in his house ; the natives of the Valleys are too poor to place their children ‘ en pension,’ even upon such moderate terms as these.

A stipend of seven hundred francs has lately been granted by the Society for the propagation of the Gospel in Foreign Parts, to enable the Waldenses to have a second grammar

school ; this bounty has been augmented by a private contribution of three hundred francs, and a school opened at Pomaretto last May, but we are not able to state any further particulars concerning it.

Such is the state of education among the Waldenses ; but the reader will at once discover a desideratum. The instruction given is only elementary, and there is no provision for a higher kind of education, or for perfecting those who are to be employed in teaching. A community, which is so determined to have a disciplined population, deserves an institution of its own, where attention may be paid to the qualifications and acquirements both of the future pastor and schoolmaster. Were a superior and pattern seminary, a college, to be established, the advantages might be incalculable not only to the Waldenses\* and to Piemont, but eventually to all Italy. An English clergyman, who has the interests of the Waldenses very much at heart, and who was provided with the means of laying the foundation of some useful institution in the Valleys, made a journey to Piemont, two years ago, to see what could be done, and to sound the Vaudois upon the practicability of any scheme which he might devise. His design and proposals were to this effect : Upon condition that the Waldenses will furnish a piece of ground, and a building fit for the purpose, five thousand francs shall be given towards a general outfit, two thousand francs towards the purchase of books, together with a yearly sum of fifteen hundred francs as a professor's salary, and one thousand francs to be divided annually among ten students as exhibitions to assist them in paying for their board. He further offered to employ his good offices towards raising funds for the endowment of two other professorships, to render the institution more effective, and submitted rules to their consideration which would be likely to elevate it by degrees to the character of the ancient college of Angrogna.

These proposals were accepted, the plan was arranged as speedily as circumstances would permit, and on the 1st day of last March the institution opened at La Torre, under the name of 'L'Ecole Supérieure,' with the following regulations :

1. 'The Institution is established for the benefit of Protestant youth, who have made some progress in the grammar school of La Torre, or Pomaretto, or elsewhere.'

2. 'So long as circumstances will not permit of the appointment of more than one professor, the principal will be

\* The attempt to put such an establishment on foot has recently been made, and defeated by the intolerance of the Sardinian government.

required to undertake to give instruction in French, Latin, Italian, and Greek ; in history and religion, according to the confessions of faith of the Waldensian church.

3. ‘The commission, or its delegates, are charged with the examination of young persons desirous of admission to “L’Ecole Supérieure,” that it may be ascertained whether they are capable of pursuing studies requisite to qualify them for the various professions.

4. ‘The students admitted into the Institution must be capable of attending the first course of lectures, which will resemble those of the first class of the College of Lausanne.

5. ‘For ten students to be elected out of the ten Vaudois parishes most remote from La Torre, there will be exhibitions of one hundred francs each per annum. If any of the parishes which are entitled to an exhibition, should not produce a claimant qualified to receive it, the unappropriated exhibitions will be offered in succession to the parishes less distant from La Torre, according to a cycle predetermined.

6. ‘The exhibitions will be granted, after examination, to the most deserving of the candidates, from the several parishes which are to enjoy the right of nominating claimants.

7. ‘If candidates for the same exhibition should prove equal in merit, it will be awarded to the most necessitous.

8. ‘All the students and exhibitioners who attend the lectures of the Institution, whether they reside with the professor or not, will be required to submit to the rules which shall be adopted for its regulation.

9. ‘The students must attend public service in church every Sunday ; besides which they must be present at a particular service within the Institution, which will be composed and appointed by the commission.

10. ‘Every student must daily attend at the hour of prayer, and must be present in class at a Scripture lecture, which will be given every day, either in the original language of the Old or New Testament, or in the French or Italian tongue, or in copies of the Lingua Valdesa.’

These rules were drawn up with the view of meeting any objections which might be raised by the Sardinian government. They were intended to be a bar to the admission of Roman Catholic students, as otherwise it might have been said that the Institution was established for purposes of proselytism. We have already mentioned that the rulers of the Waldenses have always eyed their scholastic establishments with jealousy ; and it was not until after two express treaties with England, which guaranteed the security of their personal and religious privileges to the Waldenses, that the House of Savoy issued

an edict, consenting to recognize their schools as lawful institutions. It was to this effect: ‘It shall be permitted to our subjects of the said Valleys to elect from among themselves masters of schools, provided they do not receive any Catholics into their schools, but only the sons of the said Waldenses.’

Scarcely, however, did the infant establishment open, before the Intendant of the Province went to La Torre, with an order of the Minister of the Interior in his pocket, and by an act of arbitrary authority prohibited the professor from continuing his instructions, dispersed the students, and closed the school. All this happened in March last—the opening of the school and its suppression.

The short-sighted policy, the despotic veto, which has spread such consternation and disappointment among the Waldenses, is the more atrocious because it is in direct violation of one of the most solemn treaties which one country ever made with another.. The King of Sardinia is pledged to the King of England, by the obligation of mutual engagements\*, to respect the privileges of his Waldensian subjects; and whoever will take the trouble of going to the State Paper Office may see, not a copy, but the very treaty, with the signature and great seal of Victor Amadée attached to it, by which personal and religious liberty, and its inseparable appurtenances, are secured for ever to the Waldenses.

Nothing can be more binding or emphatic than the words of the treaty. ‘Qu’elle remet et conserve eux, leurs enfans et postérité, dans la possession de tous et chacun leurs anciens droits, édits, coutumes, et priviléges, tant pour leurs habitations, négoce, et exercice de leur religion que pour toute autre chose. . . . Et finalement les ministres de Sa Majesté Britannique, et de leurs Hautes Puissances, seront instruits et autorisés pour régler selon les anciens édits, droits, et concessions, avec les ministres de S. A. R., le détail des choses et ce que pourroit rester, et être admis pour la sécurité des dits Vaudois dans cet article, comme aussi pour l'exécution d'iceluy, tant à l'égard des choses concernant leur religion, que leurs biens, leurs droits, et toutes autres.’

His Majesty’s government have been informed of the transaction by which this treaty has just been so shamefully violated, and it remains to be seen whether the Secretary of State for Foreign Affairs will quietly submit to such an infraction of sacred stipulations, and such an invasion of

\* England guaranteed to the King of Sardinia the possession of some territory, which he still enjoys, adjoining to the Milanese, and ceded by the Emperor, on condition that the Waldenses should be unmolested.

rights, which have been made the subject of a separate article of treaty between Great Britain and the rulers of the Waldenses.

*Postscript.*—Since the above was written, a petition has been addressed by the Ecclesiastical Authorities of the Vaudois to their new sovereign, Charles Albert, which has been favourably received, and they have been permitted to re-establish the Institution which was suppressed by an arbitrary order under the government of the late King. But this permission has been shackled with restrictions, which it is to be hoped will be removed, when a more just view shall be taken of those treaties between the Crown of England and Sardinia, which were meant to secure to the inhabitants of the valleys of Piemont, among other privileges, the full and uninterrupted right of educating their youth in their own way, and after the best manner within their means.

The licence granted by the present King, Charles Albert, on the 27th of May, limits the number of students in the first class to fifteen; forbids the use of any books which have not first been submitted to the censorship of the Intendant of the Province; makes the nomination of the masters or professors dependent on the will of the said officer; and appoints him also visitor of the establishment.

But we will hail this royal recognition of a new institution among the Vaudois for the promotion of learning as a good omen, and we will hope for still better things at no very distant period.

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#### THE GÖTTINGEN LIBRARY.

IN the establishment and conduct of a public library intended for general use, two objects seem to be of paramount importance: first, that the collection of books should be, as far as possible, equally complete in every department; and secondly, that the access to them should be as open and liberal, and the facilities for using them as great as is consistent with their preservation from loss and damage. To attain the first of these objects, the folly of mere book-collecting must be laid aside, and the funds of the institution applied, not to the purchase of expensive rarities, nor to the numerical increase of the collection only, but to the production of a uniform completeness in every part. For the second object, a judicious arrangement of the books, convenient catalogues, and

the constant superintendence of proper librarians are principally necessary.

The University Library at Göttingen has been steadily conducted with a view to these objects for upwards of two-thirds of a century; and it is now probably the most extensively useful institution of the kind in Europe. The nucleus of this library was originally formed by a learned Hanoverian nobleman, named Bülow; who with great judgment, labour, and expense, had brought together a very excellent private collection of about ten thousand books, which he bequeathed at his death to the University. By the activity of Münchhausen, the first 'Curator' of the University after its foundation, the library was rapidly increased; so that when the celebrated Heyne was first called to the University, in 1763, and appointed one of the librarians, it consisted of about sixty thousand volumes,—a number by no means contemptible at that time in comparison with the libraries of other German Universities. At the time of Heyne's death, in 1812, the number had increased to two hundred thousand, and at the present moment the library contains upwards of three hundred thousand volumes. The object constantly kept in view in forming this collection has been the provision of useful books in all languages and in all branches of literature and science; so that it is now, perhaps, the only library in existence in which the literature of all nations and all departments of science are found supplied in equal relative completeness. Of the thousands who have visited and used the library, the great majority probably are unacquainted with its peculiar system of management, and would be surprised to learn the variety and extent of the business involved in its machinery. In the number of books, as well as in manuscripts and curiosities, it is exceeded by many other libraries; but its distinguishing merits consist in the judicious selection of the books purchased, their excellent arrangement, and above all in the liberality of the means adopted for facilitating the use of them.

From circumstances peculiar to the situation of Göttingen, and the course of education pursued there, some parts of the system adopted at the library would be inapplicable to other places; but many useful hints for the organization of libraries may be taken from it; and in this country, where we have so many magnificent libraries, possessing large stores of books and ample funds for increasing them, which are far less used, and far less useful, than they might be, by reason of their incompleteness and the want of system in the management of them, and above all by reason of their *inaccessibility*,

it may be worth while to direct the attention of our readers to the means by which an institution like the Göttingen library has been brought, from very small beginnings, and with very limited funds, to a state of comparative perfection.

In the Life of Heyne by Professor Heeren, from which we have taken many of the facts in the following account, the machinery of the library is compared to that of the counting-house of a commercial establishment, and the comparison is fully borne out by the extent of the business and correspondence carried on, the number of books and hands employed, and the order and punctuality with which the whole is conducted. In order to follow up the system originally adopted by Heyne, namely, to render the library as generally complete as possible in every department, the progress of literature and science both at home and in foreign countries is carefully watched; in England, France, Denmark, Sweden, Italy, and Holland, agents are employed to purchase, under certain limitations and directions as to prices and subjects, all books of general utility and interest which are published in those countries; selections are made from the masses of books published at the great annual fairs of Leipzig; and catalogues of all the considerable book sales in Europe are sent to the library, and examined by the librarians, such lots being marked and priced by them as are to be purchased. Thus the library is constantly progressive, always keeping pace with the advance of knowledge in all parts of the world. The uniform *completeness* produced by this judicious and discriminating attention in the purchase of books is very remarkable. An Englishman who visits the library is astonished to meet with a more complete collection of books of English history and literature than he will readily find in his own country; whilst the Spaniard, the Frenchman, the Italian, and the Oriental scholar find their respective departments equally well filled.

It is manifest from what we have stated that the selection and purchase of books, and the correspondence required in that department, necessarily furnish a great deal of business; but another most important branch of the labours of the librarians consists in the preparation and continuation of the different catalogues, and as these appear to us to form one of the most original and valuable parts of the institution, it may be useful to describe them.

The catalogues are four in number, each being distinct from the other, but all forming parts of one whole. Every volume brought into the library is entered, in the first instance, in a rough book called the 'Manual. In this cata-

logue the name and title of the book are entered concisely, together with a memorandum of the date of its introduction into the library, and of the place from whence it came.

In the second place, the volume is entered, with a full statement of its title, into what is called the 'Accession Catalogue.' This forms, at the end of every year, four volumes, containing, 1st, Theology; 2dly, Jurisprudence; 3dly, History; and 4thly, Miscellanea, not belonging to any of the preceding classes. Each of these volumes is subdivided, according to the form of the book to be registered in it, into folios, quartos, and octavos, the latter denomination including all smaller sizes. On one side of the title of the book in this catalogue is placed the page of the Manual in which it is to be found; and on the other side is a column for figures denoting the number of this particular book in the collection: this number thus becomes the conventional name for the book in the library, and is entered in the Manual in order to make a communication between these two catalogues.

The Manual and the Accession Catalogue thus contain a short minute of the history of each book; they are renewed annually, and their contents embrace only the transactions of a single year; they are, however, only serviceable to the librarians as auxiliaries in the internal economy of the library; the Alphabetical and Scientific Catalogues, which are permanent, are, from their fullness and accuracy, of the greatest importance to those who use the books. The Alphabetical Catalogue was commenced by Heyne in 1777, and was finished under his direction, with great labour and at considerable expense, in about ten years. In this catalogue the books are placed alphabetically according to the names of their respective authors, and the works of each author are also arranged alphabetically under his name according to the leading word of each title. Anonymous works are also arranged in alphabetical order by the principal words of their titles. The form of this catalogue is large folio, and a whole leaf is invariably appropriated to each name or title, in order that the alphabetical order may be strictly preserved, and all interlineation avoided. When one leaf is filled (which has frequently happened in the case of voluminous writers, such as Adelung, Eichhorn, Scott, and many others), it is taken out, and its place supplied by two new ones, which are inserted by the binder: upon these the contents of the full leaf are copied, and the title of the newly published work, which causes the overflowing, is introduced in its proper situation. If the volume by means of the frequency of new insertions becomes too bulky for convenient reference, it is divided into two or

more parts. An obvious advantage of this method is that the catalogue grows with the growth of the library, and may be expanded to an indefinite extent as new books are introduced. It is, therefore, always perfect in itself, and the necessity for a new catalogue can never arise. When a book is entered in the Alphabetical Catalogue, the date of its introduction into the library is placed in a column on one side of the title together with the page of the Manual in which it is found, and its class and number in the Accession Catalogue. On the other side of the title, a reference is given to the department of the Scientific Catalogue to which the book belongs. In this manner the communication between all the catalogues is established. In 1816, this catalogue consisted of nearly one hundred and fifty volumes of a large folio size,—an extent which might be supposed inconvenient and unmanageable, but in practice the scrupulous adherence to alphabetical order renders it fully as easy of reference as an encyclopædia : each volume being, of course, lettered at the back, with the first and last words of its contents.

The fourth and last process is to enter the book in the Scientific Catalogue, or catalogue of subjects. Here it is placed strictly according to its contents, and is classed without any respect to the language under the head to which it most naturally belongs. The head and the page of the Scientific Catalogue in which the book is found are then marked in the other catalogues, and also in the book itself, and it is finally placed on the shelf amongst the other books precisely in the same relative situation in which it stands in the Scientific Catalogue, with this difference only, that the folios, quartos, and octavos (under the last of which all smaller sizes are comprised), are deposited on different shelves in the same compartment. There are, however, four classes of books which are not arranged according to their contents, but according to the language in which they are written, and the age in which their authors lived. These are the Greek and Latin classics, the fathers of the church, modern poets, and romance writers, and collections of the works of authors on miscellaneous subjects belonging to more than one general head of classification ; for instance, *Oeuvres de Voltaire*, Swift's Works, &c.

This catalogue, therefore, is a kind of map or plan of the library, and furnishes the inquirer at a single glance with every thing which it contains on the subject of his investigation. Thus if a particular author or work be inquired for, the Alphabetical Catalogue shows whether it is in the library ; and if so, in what precise situation it will be found : if, on the other hand, a subject is inquired for, the librarian or

the inquirer turns to the Scientific Catalogue, and finds arranged, in exact order, all that the library contains on that subject. The advantages of arranging books according to their subjects in the catalogue and on the shelves are too obvious to require illustration; but at a university where books on various subjects are constantly required by students and literary men, it is particularly useful to be enabled to display at one view the extent of assistance which the library is capable of affording.

It will readily be perceived that in cases where a science has been progressive, or has undergone a total reformation, as chemistry or geology, the completion of the Scientific Catalogue requires not only much thought and constant and unremitting industry on the part of the librarians, but also a thorough acquaintance with the science itself and its branches, and an accurate judgment in the analysis and classification of the voluminous materials. We believe that these labours are not performed at any other library with such skill and scrupulous attention as by the librarians at Göttingen; and their scientific catalogue, which, in consequence of the completeness of the collection, forms almost a general index to knowledge, is certainly a singular monument of literary industry.

Every day throughout the year, not excepting the vacation that takes place between the semestral courses of the German universities, the library is open to all students and members of the University at certain specified hours, and during these hours visitors are at liberty to use the books with the greatest freedom, being restricted only from taking them down or replacing them with their own hands. In order to avoid delay in supplying the books required, several of the younger literary men, resident at the University, are employed to assist the regular librarians during these public hours—a service which is gladly rendered by them without any pecuniary compensation, as they thereby become practically acquainted with the library, and obtain the advantage of pursuing their own peculiar studies there at extra hours.

In addition to the free and gratuitous admission to the library during the public hours, all persons resident at Göttingen, whether members of the University or not, enjoy the singular privilege of using the books at home. The value of this privilege will be fully understood by those who have been compelled to pursue their literary or scientific labours with the assistance of books which can only be seen at certain hours at a public library, and have undergone all the vexation, delay, and inconvenience occasioned by the sacri-

fice of personal habits and modes and times of study. In Göttingen this great advantage is supplied to students and men of letters, with little or no danger to the books, although with a considerable increase of labour to the librarians, in the following manner. The professors of the University, and men of learning resorting to Göttingen for the purpose of using the library, or for literary purposes in general, who have made themselves known to the librarian, may receive books by depositing with the secretary a ticket, containing the title of the book required, signed by the person requiring it. Students, and persons who are not entitled to receive books in their own names, must have their tickets countersigned by a professor, who thus makes himself responsible for the safety of the books. The secretary, therefore, has upon his table a portfolio in the name of each professor; in the one part of which are contained tickets for books, which he requires for his own use, and in the other, those which are given to students and others, for whose care and due observance of the rules of the library he has made himself answerable. The tickets are distributed by the professors with the greatest liberality, no further introduction being required by the party applying for them, than such as may give reasonable satisfaction, that the books are *bondā fide* required for the purposes of study. In practice it is usual for the professor to sign in blank a number of tickets, which are afterwards filled up with dates and titles, and used by the student as occasion requires. When these are exhausted, more can readily be procured from the same professor; but to prevent confusion as much as possible, by enabling the secretary at once to see the responsibilities of each professor, no student is allowed tickets from more than one professor during the same half year. A separate ticket is required for each book; but where a work consists of several volumes, the whole may be delivered upon a single ticket. Students are not permitted to have more than six books, or sets of books, at the same time; in the case of professors and others there is no specific rule on this point, as it has been thought that with them a sense of propriety and a regard to the general usefulness of the institution would be a sufficient check to an unreasonable demand of books. As soon as a book is delivered out of the library to the bearer of one of these tickets, the number of volumes and the form of the book are marked by one of the librarians upon the ticket, and from that time the responsibility of the professor, who has signed or countersigned it, commences. The tickets of each day are in the first instance placed in a box all together; they are then

entered into the monthly catalogue of lent books, and are finally distributed by the secretary in the manner above mentioned into the several portfolios of the professors. When the book is brought back to the library, the ticket is cancelled and returned to the borrower, and the title in the monthly catalogue struck through with a pencil. Regularly every book should be returned at the end of a month; but the application of this rule is governed by circumstances, and is, in fact, frequently relaxed by the librarians upon the representation of the borrower. At the end of each academical session, however, all books, whether in the hands of professors, students, or others, must be actually re-delivered at the library, and if wanted again, new tickets must be given; the rule being inflexible, that no ticket is available after the expiration of six months from its date.

When a book is returned it is carefully examined, and if any injury has been done, it must be made good by the borrower or his surety. With respect to loss of books or damage sustained by wilful or wanton mischief, Professor Benecke, who has been a librarian at Göttingen for more than twenty years, assures us that he has invariably found that 'mistrust and reserve in lending the books have tended much more to produce mischief than liberality and confidence.'

These regulations, and the punctuality with which they are observed, render it practicable to keep a library, which is unquestionably as numerously frequented and as much used as any in the world, in such a state of good order as incalculably enhances its value. Indeed it is quite obvious that, without a scrupulous attention in all material points to the letter of the regulations, a collection of 300,000 volumes freely accessible to and much used by a perpetually changing body of about two thousand persons, would, in a very few years, be reduced to a hopeless and useless chaos.

The business of the library is conducted at present by a chief librarian, two librarians, three sub-librarians, and a secretary. The selection of books for purchase devolves exclusively upon the three officers first named: the general duties of the establishment are divided amongst all the officers. From the time when Heyne undertook the improvement, or rather the re-organization of the library, the different offices have been ably and efficiently filled; and it is worthy of remark, that the appointments are distributed amongst men of eminence in literature or learning. At the present moment, the chief librarian is Professor Reuss, author of a 'Catalogue of Treatises published in Transac-

tions of Literary Societies,' a laborious and useful work. The librarians are Benecke and Grimm, the first of whom is well known to the literary world by his editions and illustrations of several of the early German poets of the thirteenth century, and will be particularly remembered with gratitude and respect by all Englishmen who have studied at Göttingen. The name of Jacob Grimm is well known to philologists. His brother, Wilhelm Grimm, some of whose works have been translated into English, is one of the sub-librarians. These gentlemen, though generally professors or teachers in the University, are not *required* to deliver lectures, or to take any part in public instruction, the management of the affairs of the library being considered as a sufficient occupation of their time. Their presence at the library is required daily during the year, from nine o'clock in the morning till twelve. If to this is added the daily attendance during the public hours, namely, on Wednesdays and Saturdays from two till four, and on other days from one till two o'clock, it is manifest that these offices are by no means sinecures.

The annual income appropriated to the purchase of books is not altogether fixed, but it seldom exceeds 800*l.* sterling ; this sum also covers the expenses of book-binding. The salaries of the officers and the repairs of the building amount in general to upwards of 800*l.* per annum more ; we believe that we are correct in stating, that upon an average of years, the whole expenses of the library, inclusive of the enlargement and alterations of the building, which become necessary as the number of books increases, do not amount to 2000*l.* per annum. With such small means it is really surprising to find how much has already been effected by the judgment and assiduity of those who have conducted the library, and the laudable resolution with which they have kept in view the single object of *usefulness* in the application of their funds. The number of books which the library has derived from presents is by no means considerable ; we have heard, indeed, of a handsome donation made by the late King in the year 1816, and also of presents from His Royal Highness the Duke of Sussex, the Dukes of Bedford and Buckingham, the Duchess of Devonshire, and several literary societies of England ; but we have also heard a wish expressed, (which we would gladly enforce wherever our recommendation can be available,) that this liberality should be extended to works of a particular description published in this country, which are often not to be procured by any other means ; we allude particu-

larly to works on India, and Sanscrit books, which would perhaps be nowhere more used and more highly appreciated than by the constellation of oriental scholars, who at present distinguish the University of Göttingen. We give it as our honest opinion, that an author, who has published a really useful book, cannot better provide for the due appreciation of his services, or the general diffusion of his discoveries, than by presenting a copy of his work to the library at Göttingen.

By giving this account of the library at Göttingen, it is not intended to represent the system there adopted as altogether perfect, or as one which could be always applied with similar advantage to libraries in this country. Admirable as we think their plan of catalogues in many respects, we admit that it is capable of some improvements; we are aware too that in a small town like Göttingen, with a peculiar population depending upon the University, and subject to the University laws, any loss or damage from a free circulation of the books might be prevented by measures of precaution, which would be quite insufficient for that purpose in a large and mixed population; we admit, therefore, that a degree of liberality in the opportunities given for the use of the books may be safe and justifiable at Göttingen, which in London would be dangerous and ruinous. Still there is a great deal in the system we have described, which might be introduced into most of the public libraries of England with advantage. In the first place, we might profit much by adopting in our public libraries, and especially such as are attached to Universities, some principle or system in the purchase of books, by which the collections might become more complete in all departments. An intelligent German, who visited England in 1802 and 1803, says, ‘It is scarcely credible that in the three United Kingdoms, there is not one public library at all complete in the most important branches of literature. From the thirty costly collections belonging to the different colleges at Oxford and Cambridge, it would be impossible to form a single library so perfect as those at Göttingen and Dresden, or several others in Germany which might be mentioned; for they consist almost exclusively of ancient classics and theology, and the notion of filling up the deficiencies of one by the abundance of the other seems never to have been entertained. Consequently in most of these college libraries you find exactly the same poverty, and the same wealth\*. Can there be a doubt that in all libraries intended for general

\* Goede's *England*, vol. iii. p. 15.

use, uniform completeness is most important? It is not required that the libraries of the College of Surgeons, or of the Antiquarian Society should be completely provided with books on other subjects than those which are the peculiar objects of the institutions to which they are respectively attached; but the libraries of the British Museum, of the Royal Society, and of all universities and colleges, should be as generally furnished with books in all branches of art, science, and literature, as the ends and objects of their foundation are general. Of what use is a perfect library of controversial divinity to the student of history? or of classical learning to the mathematician? or of natural history to the oriental scholar? The pursuits and tastes of writers and readers are as various as their names; and therefore, a public library should surely be so provided as to supply, as far as possible, the wants of all.

Again, in facilitating the use of the books, much more might be done in our public libraries than has yet been effected. In almost all of them, the catalogues are imperfect and inconvenient; and the impediments which obstruct the access to the books are often vexatious. How far it would be practicable in London to adopt the practice of lending books out of the libraries may admit of some doubt; with certain restrictions and precautions, however, we are inclined to think that it might be done in some libraries even in London; and the magnitude of the advantage to be gained would fully justify a cautious experiment. In Universities, it should and might always be done\*. We believe that the only two public libraries in this country which at present afford this great advantage to readers, are Dr. Williams's library in Redcross Street, London, and the Advocates' Library in Edinburgh; and we are not aware of any inconvenience or injury sustained in consequence of this liberality.

In the present state of intelligence and inquiry in this country, the improvement of our public libraries would be one of the most effective modes of diffusing knowledge. Notwithstanding the size and value of many of our collections, we are far behind both France and Germany in the machinery and management of institutions of this kind, and in consequence of imperfections in this respect, some of our best libraries are unfrequented and useless. 'Books,' as Milton says†, 'are not absolutely dead things, but do contain a

\* The University Libraries at Oxford and Cambridge lend out their books to members of their own body, who are of a certain standing in the University.

† Areopagitica.

potencie of life in them to be as active as that soul was, whose progeny they are ; nay, they do preserve, as in a viol, the purest efficacy and extraction of that living intellect that bred them. As good almost kill a man, as kill a good book : who kills a man kills a reasonable creature, God's image ; but he who destroys a good book, kills reason itself, kills the image of God, as it were, in the eye. Many a *man* lives a burden to the earth ; but a good *book* is the precious life-blood of a master spirit, embalmed and treasured up on purpose to a life beyond life. We should be wary, therefore, what persecution we raise against the living labours of public men, how we spill that seasoned life of man, preserved and stored up in books ; since we see a kind of homicide may be thus committed, sometimes a martyrdom.' Milton is here denouncing the crime of suppressing books before their publication ; but surely the strangling them at their birth is hardly more mischievous and fatal than smothering them when full-grown, or than condemning them to perpetual captivity by chaining them in dust and darkness on a shelf, and thus preventing their vital energies from being called into action. It is a melancholy reflection that thousands and tens of thousands of books are literally buried alive in some of our libraries, their ' potencie of life' extinguished by *exclusive* rules and regulations, intended perhaps by our ancestors for their preservation, but in the present state of education destructive of their usefulness. It is high time that this reproach should be removed ; and we feel pleasure in stating that increased liberality has already appeared at the British Museum and some other institutions in London : there is, however, much remaining to be done in all of them ; and in the college libraries of Oxford and Cambridge, where improvement has, except in a few cases, not yet commenced. We propose at a future time to lay before our readers a plain statement of the condition of several of our public libraries in England, selecting such as, from their situation or other circumstances, might, under good management, become the most extensively useful.

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## EDUCATION IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

THE elementary instruction obtained at the parish-schools throughout Scotland has long been acknowledged as the source of important benefit to that country. Established more than a century ago, among a people by nature at once enterprising and sedate, those schools have conspired with the greater opportunities of academical instruction in the same part of the island, to furnish a number of active and intelligent members of the community, who by their services in remote lands have more tended to enrich their parent-country than the natives of any other single portion of the British empire. At the same time, Scotland has presented the spectacle, most gratifying to the friends of education, of a well-taught people, whose learning, it has never yet been asserted, makes them ashamed of such honest labours as belong to the different classes in which they happen to be placed. Such have been the results even of an imperfect, but still of an extended system. But the 'Reports of the Committee of the General Assembly for increasing the means of Education and Religious Instruction in Scotland, particularly in the Highlands and Islands,' shew, that the system has latterly undergone a very complete revision, and been improved by many salutary and admirable amendments.

It will be recollectcd that, in 1818, a Commission was appointed by Parliament to inquire into the existing state of education throughout the United Kingdom. The chairman of this commission (the present Lord Chancellor) requested the assistance of the General Assembly of Scotland, in the hope of obtaining, by means of queries transmitted to parochial ministers, the information which the Commissioners required with respect to that part of the kingdom. The assistance of the Assembly was very readily given, and a large collection of parochial returns was soon afterwards transmitted by Dr. Baird, the venerable Principal of the University of Edinburgh, to Mr. Brougham, by whom a digest was submitted to Parliament, which was afterwards printed and published. The returns were sent back to Dr. Baird, and subsequently served the important purpose of promoting further inquiry and consequent improvement in the plan of national education in Scotland.

Furnished with the ample and authentic details comprised in these returns, from nearly eight hundred of the parochial ministers of Scotland, Dr. Baird was enabled to state, in a very convincing and effective manner, the necessity for ap-

pointing a committee to inquire into, and, if practicable, to remedy, the insufficiency of the means of education and religious instruction then existing. By his great personal exertions the whole subject was most advantageously brought under the notice of the General Assembly, to which, in fact, it was especially recommended, as involving both the temporal and spiritual interest of a considerable portion of those whom the church regarded as its own people. It was seen too, very clearly, that the efforts of the Education Societies previously existing in Scotland, four in number, were inadequate to the objects which they professed to have in view, and also incapable of extension, chiefly through want of funds; whilst the care and exertions of government, although shown in the building of fifty new churches, had not extended to the formation of additional schools. The liberal views of the General Assembly cannot but be admired. Far from shewing any little jealousy of new opportunities of instruction being afforded to the people, and still farther from considering general education as a thing in itself opposed to religious instruction, they evidently considered that, without the means of giving a general education to the lower classes, great difficulties would always be presented to imparting to them even religious instruction itself.

Upwards of a hundred years before, in 1704, the General Assembly had made an unsuccessful attempt to accomplish the formation of a committee for the very purposes which, since the appointment of the Parliamentary Commission in 1818, have been so happily carried into effect. Since the year 1725, also, acting merely as the agent of the royal bounty, the Assembly had, by a committee, applied to its destined use a sum annually allowed for the support of the missionaries and catechists in the Highlands and Islands. But it was not until seven years ago that the General Assembly took a more prominent and active part, by the appointment of a numerous committee, consisting of ministers and elders in nearly an equal proportion, with instructions to ‘inquire and to report to next Assembly as to an advisable plan for the Church to adopt for increasing the means of education and of religious instruction throughout Scotland in general, where it may be needed, but particularly in the Highlands and Islands, and in large and populous cities and towns; and, after collecting and digesting the relative facts, to take what proper and prudent measures may be in their power to learn, for the information and direction of the ensuing Assembly, what degree of co-operation may be reasonably expected from heritors and others in the different districts of the country; and whether

also, and in what manner, Government may be disposed to give public aid for carrying into effect the important measure in contemplation.'

To this renewed attempt the General Assembly was encouraged by the changes effected during the lapse of a century in public opinion, and in the pursuits and resources of the nation, which now showed a much more active spirit of co-operation in all charitable undertakings : the result justified the Assembly's confidence.

A sub-committee was formed, consisting of persons already experienced in the business of the Education Societies, or officially connected with them, or with the Highland districts ; an arrangement by which the Assembly at once availed itself of their information, and avoided collision with establishments previously existing. Invested with full power, and only required from time to time to report to the general committee, the individuals composing the sub-committee have pursued their extensive and most useful labours up to the present time. They directed their inquiries not only towards those places where the means of education and religious instruction were entirely wanting, but where they were inadequately supplied, or through imperfect instruments. Many details, which were not comprised in the Parliamentary returns, remained to be gathered by their endeavours, and a more general and searching inquiry was instituted by means of queries, copies of which were forwarded to every clergyman in Scotland ; the answers to which queries, received in the space of two years from the time of the formation of the committee, have of course been objects of continual reference and of the utmost value.

The first report of the committee to the Assembly was founded on these answers, and represented, that in the six synods of Argyle, Glenelg, Ross, Sutherland, and Caithness, Orkney and Shetland, containing one hundred and forty-three parishes, and a population of 377,730 persons, no less than two hundred and fifty additional schools and one hundred and thirty catechists were urgently called for. It set forth, also, that the people of those districts were ardently desirous of further opportunities of general and religious instruction, wishing for the young, worldly advancement ; and for the old, the consolations of the gospel ; but that their poverty afforded them no means of procuring these advantages for themselves or their children. All other parts of Scotland being comparatively well provided for in these respects, it was recommended that to these districts the first attention of the Assembly should be directed. The report further

stated that the heritors in general, and many other benevolent individuals, would willingly render assistance towards accomplishing the desired improvements.

The General Assembly immediately instituted collections in aid of their great object throughout all the chapels and churches of the establishment, and opened subscriptions for the same purpose ; instructing the committee, (which was re-appointed) when the funds raised were ascertained to be sufficient, to nominate schoolmasters and catechists in the stations most urgently in want of them, after due communication with the heritors and others concerned. In all these proceedings the zeal and promptness, as well as the judgment and prudence, of the General Assembly, are equally to be admired.

Thus authorised, the sub-committee continued and even increased their labours : they entered into an extensive correspondence with Highland clergymen concerning the stations most suitable for schools in their respective parishes ; they took measures for securing proper and decent accommodation for the schoolmasters, requiring for each a school-house, a dwelling-house, containing at least two apartments, a garden, fuel, and grass for the summer and winter maintenance of a cow. It had been found, by the experience of the Society for Propagating Christian Knowledge, that these accommodations were generally granted with much willingness by the heritors, whose interest in the welfare of the schools was even increased by being thus called upon to contribute to their first establishment. It is certainly true, and may be usefully remembered by the promoters of all benevolent institutions, that there are many excellent individuals who require, in the first instance, to be solicited to contribute, but who, when they have once become benefactors, acquire a zeal in the cause which would otherwise have remained undiscovered, or even unfelt. At first they give a subscription from the shame of refusing, and they subsequently increase it from the pleasure of giving.

The appointment of teachers being a matter of great importance, the sub-committee called up from many parts of the country, and examined with much care the candidates for such an office. They also prepared a set of elementary school-books in the Gaelic language, thus removing what must have been a formidable obstacle in the outset of their plan. In frequent meetings, and with much consideration, they drew up regulations for the management of the schools, for the government of the teachers, and for their own guidance. In these useful exertions they were

cheered by the liberal donations which soon, from all parts of the country, began to flow in upon them. They were enabled to report, in 1826, that a fund had been realized, amounting to £5488 $\frac{1}{2}$ , partly subscribed by individuals, but chiefly derived from parochial collections; and also, that they had selected forty stations for schools in different districts throughout the Highlands and Islands, and that they had two schools in actual operation. This report was received with the well deserved thanks of the General Assembly, by whom the committee was re-appointed, and instructed 'to proceed with all diligence to administer the funds, and apply them agreeably to the principles and rules they have hitherto followed, with as much economy and usefulness as possible, to promote, by the Divine blessing, what the Assembly has so much at heart—the extension of education and religious instruction in those districts of the country where they are still urgently required; and the committee was appointed to report to the next General Assembly.'

It is gratifying to pursue the labours of the committee from this point. In another year (1827), they could report that they had established *thirty-five* schools, under qualified teachers, and were provided to establish eighty-six more, in stations which they had selected; and that upwards of £2000 $\frac{1}{2}$  had been added to the fund reported in the preceding year. To these results the unanimous concurrence of all the Ministers of the Church of Scotland mainly contributed. However unimposing the Scottish form of church government appears to be, that concurrence is, we observe, stated as being equivalent to the support of all the public—a very material circumstance.

The following passage in the narrative of their proceedings exhibits the view by which they were directed:—

'In the returns to the queries which the Committee had circulated in the year 1825, two sorts of exigency were submitted to their consideration, one or other of which existed in almost every Highland parish. Some districts, with an abundant population, were without a school of any description; and the bulk of the people were unable to read or write. Nor could they have induced a schoolmaster, of the necessary character and qualifications, to settle amongst them with any prospect of a tolerable remuneration. Such places claimed the first attentions of the Committee, and thither they offered to send teachers qualified to instruct in reading, writing, arithmetic, the principles of religion, and frequently in grammar, book-keeping, and mensuration. If the population was abundant in such districts, the Committee did not object that the school which they offered should be considered permanent—as permanent at least as their own supplies from which it was to be supported;

but if the population was small and thinly scattered, they directed that the teachers should officiate alternately for eighteen months or two years in succession, at two or more separate stations, according to the plan of itinerating schools, which has been practised by other Societies with so much benefit in the Highland districts. The other case was that where the common branches had been taught more generally, but where many of the people desired, and the clergyman or heritors recommended, that, among other branches, the higher ones of Latin, geography, and practical mathematics should be taught to such scholars as chose to apply for these; and here, too, the Committee recognized the propriety of their interference. They were not deterred by any apprehension of prematurely offering the refinements of education, or of wasting the fund at their disposal, consecrated, as it was, by its charitable origin, to objects of indisputable necessity. But they considered the design of the Assembly in its whole extent; and they remembered the generous views entertained, two centuries ago, by the legislature of this country, when, even at that less enlightened period, it enjoined the means of a classical education to be provided at every parish school. If, from that standard, parish schools had now considerably declined, was not this the result of negligence, and not of growing wisdom? Perhaps, too, the example exhibited by the better sort of the Assembly schools might contribute, in some degree, to restore the ancient condition and character of the parochial, as well as to elevate to a new rank such other schools as might happen to be established in their neighbourhood. To teachers qualified in the higher branches, the Committee proposed a salary, exceeding only by a trifle what they offered in the other case; and on such terms, they found no difficulty in procuring as many well qualified individuals as were required.

' It is believed that teachers of the latter description were not to have been procured without the mediation and careful selection of some Society: for the people at these remote situations had not the same opportunities of choosing among well educated men; nor would they have salaried, to the same amount, any individuals that might have settled amongst them on their own adventure: if they had, the latter would still have wanted that security for the continuance of their provision which, under the usual condition of good conduct, they were likely to enjoy on the scheme of a public society.

' At the meeting of Assembly 1827, the Committee reported that they had accordingly called before them and examined individuals of both descriptions to the number of one hundred and twenty-two; and that among those whom they retained with a view to appointments, the proportion of the higher to the lower class was fifteen to thirty-five,—there being nearly the same proportion betwixt the stations that required superior, and those that only sought the ordinary, branches of education.'

Athough the committee had been careful to frame rules for the guidance of the different schools, they thought it essential

that each minister in whose parish a school was situated should frequently visit it, and as it were superintend the conduct of the schoolmaster. The schoolmaster was also required to furnish a half-yearly report, specifying the number of his scholars, and their progress.

In 1829, the fourth year from the appointment of the committee, they were in a condition to report that they had nearly completed the measure entrusted to their management by the General Assembly, or at least that they had almost carried it to the extent which immediate circumstances rendered advisable. At the date of that report they had founded eighty-five schools, and their attention was now rather directed towards the means of maintaining these in successful operation than to increasing their number, although a small additional number of schools (six) was then contemplated and in progress.

The judicious attempt made in the outset of their proceedings to interest the heritors in the plan had proved abundantly successful, as by them, in almost every instance, the school accommodations were voluntarily furnished,—a fact honourable to all parties, to the heritors themselves, and to the Committee of the Assembly, in whom it showed that the heritors placed entire confidence.

From the report of 1829 it appears that there had been in attendance at the different schools, in the half-year preceding, no fewer than 6486 scholars, of whom 2512 were learning to read Gaelic; 5491 were learning English; 3057 were getting instruction in writing and arithmetic; 63 in book-keeping; 114 learning Latin; 57 geography; and 76 practical mathematics and mensuration. As it is highly probable that nearly all the six thousand and odd scholars, thus introduced to some branch or other of knowledge calculated to make them more intelligent and more useful, would have been left, but for the establishment of these schools, in the original ignorance to which poverty and the remoteness of their habitations from opportunities of learning had consigned them, the General Assembly, and especially its committee, has, indeed, good reason to look back upon its labours with satisfaction. But not contented with the precautions already alluded to for securing the efficiency of the several schools, the committee appears frequently to have deliberated concerning some plan of making their superintendence more particular, and to have contemplated the appointment of an especial visitor for the whole establishment. The Convener relieved them from the difficulties with which this scheme was beset, by undertaking to per-

form a tour of inspection himself. In company with the secretary of the committee, Mr. Gordon, he employed two months in doing this service previous to the report of 1829, travelling, in the course of it, more than two thousand miles, through the shires of Perth, Inverness, Moray, Ross, Sutherland, and Caithness, the islands of Orkney and Shetland, and some of the Western Islands. This service was again performed in the ensuing year. The English reader may form some idea of the importance of it by a mere inspection of the map; but those who have travelled through some of the districts named, will be still better enabled to appreciate the value of exertions by which the light of knowledge, resembling in its effects the vivifying light of the sun itself, is gradually diffused over desert places, and through retired and humble hamlets, and lonely cottages without number, carrying with it, beyond all question, an increase of happiness wherever it finds entrance.

The results of the personal inquiry made during this philanthropic tour were, on the whole, very satisfactory, and such an intimate knowledge was obtained of the necessities of the different districts, as must have proved very useful to the committee at head-quarters. Among other facts of a gratifying nature, it was ascertained that the teachers sent by the committee were held in much estimation, and looked upon as so many instructive models for the imitation of inferior masters. It is thus with all efforts made with sincere intentions and a requisite degree of prudence; the actual or immediate power of the instruments employed is necessarily limited, but the effects of their exertions, being wrought under a superior guidance, always exceed the first expectations of those who begin the work of benevolence.

In the latest report in our possession, that for May 1830, we observe, with pleasure, every sign of a uniform and steady progress. The number of schools had not, in the year following the preceding report, been much increased, the committee declaring that, though ‘they know, and have been taught to confide in public beneficence, they will not abuse it by extravagant expectations, or even by attempting to stimulate it to exertions beyond the usual tenor of its habits.’ They remark, however, very justly, and there are many persons eminent for zeal in the cause of charity upon whom it is to be hoped the remark may not be thrown away, that ‘the sphere of Christian enterprise is not alone among the remoter regions of the earth: there are concerns sometimes of more real magnitude, because admitting of an easier and closer agency, which demand the attention of the church at

home.' They add, and are fully justified in adding, that ' it is with no vain pleasure that they may contemplate seven thousand young persons taken up, through the public bounty, and instructed in various branches of useful knowledge, who had been otherwise, in a great measure, abandoned to idleness, and ignorance, and vice.' Although the committee have never forced or commanded the study of any branch of knowledge not elementary, they refer to a table showing the different branches which are actually taught, (the higher being only taught when requested,) as proving the desire for a great variety of useful instruction really existing in the Highlands and Islands. By this table it appears that of about 7000 scholars, 2616 were learning Gaelic; 5669 English; 2972 writing; 1912 arithmetic; 80 book-keeping; 159 geography; 41 mathematics; and 121 Latin.

The committee had, at the time of their making this report, extended their valuable care to the institution of auxiliary Sabbath evening schools. Of upwards of three thousand persons of different ages attending these evening schools on their only day of rest, it is interesting to know that nearly eight hundred are adults, not otherwise enjoying the benefits of school instruction. It is almost unnecessary to observe that a very great degree of attention is paid both in these and in the daily schools to *religious* instruction. The scriptures, we observe, are read daily as a school-book, a practice to which we believe many devout persons entertain strong objections: the other regulations under this head are such as might be expected from a church eminent for its piety.

In the selection of books for the use of the schools, it would almost, at first sight, appear that there was a disproportionate number of religious works: for nothing is more certain, than that a distaste for serious reading has often grown out of the compulsory perusal of the most excellent productions. The inculcation of piety is probably best effected by occasional, and sometimes by unexpected efforts; and of all reading, perhaps none conduces less to the moral improvement of humble readers than books of controversial theology, in which the vanity of the creature too often excludes from the view all idea of the excellence of the Creator. With a few exceptions, the religious works in the school catalogue are not open to this objection, and their number is partly explained by their being intended only for adult readers, whose opportunities of religious instruction, which the Assembly considers it a duty of primary importance to increase, are reported as being very scanty. Many excellent moral works, several [entertaining books] of travels, some historical and

geographical works, some well-selected poems, and a few books of a scientific character, are also included in the libraries. Gaelic being taught in the schools before English, a considerable portion of the books are in that language, and competent judges pronounce them to be pure, idiomatic, simple, and correct ; the language being such as the genuine Highlander is said to be accustomed to hear and to derive pleasure from. The works are also such as, being suitable to the tastes and feelings of the Highlanders, seem to be well calculated to excite in them a love of reading and a desire for more information. Among the Gaelic books we observe there are translations of Bunyan's Pilgrim's Progress, Blair's Sermons, Ossian, the Dairyman's Daughter, and several tracts and religious discourses. All the school-books are presented in the cheapest possible form, the whole set which the scholar requires, from the time of commencing with the alphabet to the end of his elementary instruction, only costing three shillings and sixpence,—a sum which, small as it is, is often more than the parents of the poor children can afford, so that many are unfortunately even kept from school on this account. The school libraries are of great value to the different districts. Each library consists of nearly sixty volumes in English and Gaelic ; the books of one station differ from those of the neighbouring stations, and at the expiration of two years a mutual exchange is made of the books of one station for those of another. Thus, in the course of six years, each school will have had the advantage of possessing about one hundred and eighty volumes. This, with reference to the wild district in which the arrangement exists, is literary wealth. There are, indeed, we suspect, many individuals whose education has been conducted in country schools in England, in whom the comparison even of these advantages with their own condition as school-boys, will renew often-felt regrets at the remembrance of the difficulty with which, even at the commencement of the present century, books could be procured to gratify the thirst for reading, which is one of the chief pleasures of intelligent boys.

The value of these libraries is exceedingly increased by their being made easily accessible to the families of the school-children. Few people in the upper ranks, or even in the middle ranks of life, know much of what passes in the interior of cottages, and from this ignorance many well meant schemes for the improvement of the poor prove abortive : but those who know the habits of the common people, must also know that the worst part of their condition does not so much consist in the coarseness of their food, clothing, and lodging, things to

which custom has made them indifferent, as in the listlessness of all hours not necessarily or commonly given to labour. It is to relieve this that the common people fly for amusement to many unprofitable ways of spending time and money, and often sink into sloth and sottishness. The young and active, and those who have had some education, feel this want of employment the most. To them a book is a gift of value, and a library an inexhaustible source of happiness. In the promotion of education it should never be forgotten how very essential it is that good books should be provided for those to whom the blessing of education itself is imparted. It is yet, however, much to be regretted, that in an age characterized as much by the extraordinary number of books daily issuing from the press as by any other circumstance, so very few should yet have been written adapted to the understanding of the labouring poor of agricultural districts, and of course of those in which the Highland schools are established. Some appear to be written to show the learning of the writers, and some to show their condescension. Some are too dictatorial, and some too childish. In some, vulgarity and meanness are mistaken for clearness and plainness; and from others the well meant zeal of religious persons has deterred readers by the everlasting repetition of serious exhortations, by which few are improved, and many are offended. Nay, there are some very excellent persons who look upon moral observations, if unaccompanied by an enforcement of the tenets of some particular church, as absolutely dangerous reading, just as if morality and religion were in their very nature diametrically opposed to one another. We believe the General Assembly, judging from the reports of their committee, understand better both the people whom they wish to instruct and the true interest of religion; and although the collection of books in their list might admit of improvement, we cannot doubt the vast utility of sending them forth into those remote parts of the island where, when the committee began its labours, scarcely any books, save a few school-books, were to be found. Above a century since the General Assembly distinguished itself by planting about eighty libraries in the Highlands; but of these hardly a vestige, it seems, is now to be found. The renewal of such wise endowments has been hailed by the Highlanders, who are an intellectual, vigorous, and ambitious people, with the liveliest gratitude.

In looking over the different reports of the schools, there are some statements which, simple in themselves, and unaccompanied with comment, are yet calculated, in no small

## *Education in the Highlands of Scotland.*

to interest every benevolent reader. The contemplation of a desire for improvement struggling under all the miseries of poverty is in itself affecting. The report of a deputation concerning the school of Arinagour, in the island of Coll, states, that 'the people of this island are poor, and have not much intercourse with the inhabitants of neighbouring islands. No teacher could have had encouragement to settle amongst them on his own adventure; when the Assembly school was opened, scholars came from all parts of the island, many from a distance of five miles every day. The grown up people showed the deepest interest in the instruction of their children. Mothers with their arms were present at the examination, and with eagerness on the progress of their children attended; and when the examination was concluded, these women, anticipating their husbands, and assuming to themselves the task of speaking in behalf of their whole community, expressed in their own language their eloquent acknowledgments of the blessing which the school had brought to them.'

'ould be injustice towards a laborious, self-denying, and ill-requited class of men, namely the village schoolmasters, not to add what follows:—

'A teacher has generously extended his instructions to the people in the place, without seeking any remuneration; for they have none to give. Last winter, the heads of families met every evening in his dwelling-house, and were taught by him. These meetings were generally attended by nineteen or twenty-four heads of families residing in the village.'

'There are many actions which commonly pass for brilliant, but seem to be inferior in real merit to this devotion. On the part of a man whose days are passed in the same task of teaching children, and who yet undertakes instruction at the close of it to those whom to teach is still greater labour; apparently, from a mere love of his duty, thus relinquishing almost all the little leisure his humble but most useful station affords.

schoolmaster of Fort Augustus writes (in 1828-29),

'falling off of this school is, in a great measure, owing to the poverty of the people, who, though the fees are now reduced to one-half of former rate, cannot afford to pay them.'

more affecting is the statement of the master of the school at Glenbenchar, Kingussie:—

'very richest here, if there are any more so than others, are

so far from being able to pay fees, that it is no uncommon thing for their children to shun school, because their parents cannot purchase the necessary school-books ; and the parents, in this situation, offer me part of their subsistence in barter for the book, though that subsistence is often far too scanty for themselves. They will offer me a daily part of their small, and in winter their rare, pittance of milk and potatoes, which are their only food—sometimes dearly imported by them from a distance. Though equally necessitous myself, I cannot always be prevailed on to accept of these contributions.'

This simple detail requires no remark ; it contains an appeal which ought to be all powerful to those whose imaginations are filled with the prospect of rescuing distant regions from barbarism, and who are too prone to forget the privations and the ignorance of many parts of their own country. Since the publication of the 'Tour to the Hebrides,' most people have felt, or affected to feel, some interest in the character and pursuits of the inhabitants of the western islands of Scotland—islands presenting many features of wild grandeur, and washed by a stormy ocean, but exhibiting much kindness and hospitality to strangers whom curiosity leads to overcome the difficulties in the way of visiting them. But this feeling has been too much like that long cherished sentiment of romantic attachment to Highland scenery and manners, often not very well founded, and producing no particular advantage to the country which the tourist delighted to describe, or the poet to celebrate. As regards the islands themselves, the want of even the common means of education was most severely felt until within a recent period : in places furnishing as many as one hundred and fifty scholars to one of the Assembly's schools, there was not any possibility, before the establishment of those schools, of inducing a teacher to settle, because there was no way of paying him. The adult population had grown up unable even to read the Bible. Since the establishment of these schools the poorest child has been taught to read, and a great proportion of the adults have most willingly offered themselves candidates for what education could be imparted to them.

By a table at the end of the report for May, 1830, giving an account of upwards of 6500 scholars, we see that 782 are not in attendance at the week-day school. Out of the whole number, nearly 6000 learn English ; nearly 3000 are taught to write ; 1900 are instructed in arithmetic ; 159 in geography ; 80 are advanced into book-keeping ; and 121 are taught Latin. Many minor circumstances, not devoid of interest, are noticed in the different tables or schemes of the establishment (Report, 1829). Of one school, that of Spin-

ningdale in the parish of Creech, containing seventy-five scholars, thirty-one of whom are girls, (the prejudice against female education, which existed very strongly in the Highlands, being fast disappearing,) it is observed, ‘attendance very irregular, owing to poverty of the people.’ Of the school at Muirtown, parish of Knockbane, it is said, ‘part of the fees are paid in value of produce;’ yet in that school there are one hundred and forty scholars. There are fifty-seven scholars at the school at Dalnabraise, parish of Rogart, and ‘fifty-seven adults attend a Sabbath evening school along with the scholars.’ Of the school of Kenmundy, parish of Deer, attended by one hundred and thirty-eight scholars, we read, ‘salary here only 12*l.* 10*s.*’

The General Assembly must, we think, derive gratification from one circumstance, of which there are occasional notices in the Reports, namely, that the children of Roman Catholic parents are in many instances sent to their schools. Out of eighty-three scholars at the school of Glenlivat, a place once only remarkable for the making of whiskey, twenty-six are of the Roman Catholic persuasion. Of thirty scholars at Dalibrog, in the parish of S. Uist, ‘all are Roman Catholics except five.’ These are not solitary instances. The Report of 1829 states, that

‘The schools are always open to scholars of this class as freely, and on the same terms, as to the Protestant, and the teachers have been directed not to press on the Catholic children any instruction to which their parents or their priest may object, as interfering with the principles of their own religion. The Catholic children resort, accordingly, to the Assembly Schools, in most cases without jealousy or reluctance, and receive every branch of literary instruction in the same classes with the Protestants, from the same school-books, and without any sort of distinction betwixt the two denominations. At the same time, the Committee have specially directed, that the religious instruction given at the Assembly Schools, whatever may be the number of Catholics usually in attendance, shall be always accommodated, strictly and exclusively, to the principles of the Established Church: and the Catholic children are invited to participate, so far as their advisers may think proper to direct them.’

In a letter from a minister in the small island of Benbecula, in which upwards of two hundred and fifty scholars are attending the different schools, it is stated that the Catholic priest lends the most efficient aid in advancing the interests of education, giving every possible countenance ‘and support to the different schools.’ The advancement of learning owes too much to our Catholic ancestors to justify the opinion, perhaps too generally entertained, that the Roman church is

hostile to the interests of education; but it is still most pleasing to observe the decline of those jealousies which have too much prevented the union of Protestants and Catholics in the promotion of a great national good. After surveying this great national work, for such it is, we derive much satisfaction from finding that adequate funds have been supplied, in addition to parochial collections, by the contributions of individuals and of religious and benevolent societies, for the expense of the whole of so large an establishment of schools as that created by the Assembly. The disbursements in the year ending May, 1830, were about 2200*l.*, and the receipts 2300*l.* Of this sum 890*l.* was received by parochial collections; 240*l.* from different societies; 970*l.* in donations from individuals; and the annual subscriptions amounted to nearly 200*l.* The private donations constitute, it will be seen, a considerable item in these receipts; they include '100*l.* from a clergyman of the Episcopalian church, well known to the world by his improvements in education,' affording another pleasing proof of forgetfulness of sectarian divisions in a general cause; and also '200*l.* from Scotsmen residing in Charlestown, South Carolina, denizens of the United States, but desiring to offer this mark of remembrance to their native country, whose institutions for education they still regard with gratitude and pride.'

Conformably to the spirit which pervades the whole of the Assembly's Reports, we remark that nothing is more apparent than the liberal regard entertained and expressed in them, for all societies and institutions professing similar objects. The leading desire seems to be to cultivate the understanding of the poor and ignorant, and by that means, including religious instruction, to make them happier and better. Far from viewing with dislike the exertions of distinct associations in the same field, and in the same localities, they have seemed careful to encourage their efforts, and most careful not to interfere or come into collision with them. For each association, of which the real object is the promotion of education in the Highlands and Islands, there is, they observe, a sphere of action peculiar to itself.

'A populous district, for example, may be supplied either with a school of the ordinary kind, or with one that shall offer more desirable opportunities to the clever and ambitious; and each of these might be superintended by separate societies. There are many stations, again, at which the population is not quite so numerous as to call for the establishment of a school with all the apparatus of accommodations,—such places might be advantageously visited, if no larger field invites them, by the teachers on that plan of occasional

or ambulatory schools, which has been so usefully employed in the Highlands and Islands by the Gaelic School Society. Another way of benefiting these districts is by the employment of catechists. In short, for every variety of locality at which education is required in the Highlands and Islands, there are corresponding varieties in the mode of operation which, if necessary, might be observed by the several educational boards; but in reality no jostling or mutual impediment has ever taken place.'

Such are the views and feelings with which all great and good works should be undertaken, and if there is, as we believe, a just hope that in education will be found a cure for most of the moral and political evils that afflict communities and individuals, no greater or better work can occupy the attention of the benevolent and the wise, than that of its diffusion wherever it has not yet been carried.

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#### THE CAMBRIDGE SYSTEM OF EDUCATION.

We shall endeavour to give, as briefly as possible, an account of the system of education which obtains in the University of Cambridge. We may hereafter be tempted to make some observations of a more detailed and critical nature on some parts of this system; but these our readers will be better able to appreciate when we have given an account of the arrangements and institutions which at present exist in the University.

The course pursued at the University of which we speak may be most conveniently described by considering it as composed of two elements: the College system, that is, the instruction presented, the superintendence exercised, and the motives offered by the separate Colleges with reference to their respective students; and the University system, that is, the examinations for honours, or *for passing*, which the University in its aggregate capacity directs; the lectures of its Professors, with their conditions of voluntary or compulsory attendance; and the prizes and rewards which are open to the competition of the students of any College.

The University system is that in which Cambridge most nearly resembles the universities of other countries, and consists, as in other academic bodies, principally of the lectures of professors, and of the examinations to which the students are subjected; together with the regulations belonging to these means of instruction. Every student, without exception,

has to undergo two University examinations, one in his second year, and one in his fourth. The subjects of these examinations are, principally, some of the Greek and Latin classics, some portion of the historical parts of the Greek Testament, Paley's Evidences and Moral Philosophy, and the elementary portions of mathematics. No one obtains the degree of Bachelor of Arts till he has passed these examinations in a manner satisfactory to the examiners. The latter of the two examinations includes a competition for the most distinguished honours which the University can bestow, both for mathematical and classical eminence ; and the names of *all* the persons who pass it are arranged in the order of merit.

Besides this course of *general* education, there are additional requisitions also belonging to the University system for degrees in the separate faculties. Candidates for the degree of Bachelor of Medicine are required to produce a certificate of their diligent attendance on a complete course of the lectures on the principles of pathology and the practice of physic, given by the Regius Professor of Physic. By a recent regulation, they are also obliged to attend a course of lectures of the Professors of Anatomy, Chemistry, and Botany, these Professors being at the same time required to make their courses of such an extent as may adapt them to the purposes of the medical student. The student also undergoes an examination (upon paper, like all the Cambridge examinations) by each of these four Professors, and has to produce a testimonial of having, on these occasions, acquitted himself satisfactorily.

Besides these requisitions, the medical student has to perform certain 'exercises' in the schools, that is, to read theses and to maintain disputations on certain professional subjects. This mode of offering to the University evidence of the fitness of the candidate for academical degrees, was, in former times, the leading and almost the sole condition of obtaining those distinctions ; and this was the case in all the Universities of Europe, and on all branches of knowledge. The most prominent directions of the statutes of the University of Cambridge are for the assiduous private practice and public exhibition of the technicalities of such disputations among the students. In medicine, the retention of the custom thus legally enjoined, seems to be by no means without its uses. In 'arts,' that is, in mathematics and morals, it has gradually become almost disregarded in effect, though still retained as a matter of form under the direction of the statutes. This change, however, has only taken place in very recent times ; and those who recollect the interest

which attended the struggles of ‘Sophs’ in the ‘Arts Schools,’ a quarter of a century ago, are wont to speak and think with regret of the departed glories of these theatres of ancient subtlety. It will probably, however, appear, to a dispassionate view, that little purpose could now be answered by syllogistic conflicts on points of modern mathematics ; and that the silent change which has converted this ceremony into an occasion for a *viva voce* examination, with a view to a previous arrangement of the competitors for honours, is a desirable and judicious improvement.

The degree of Bachelor of Civil Law is conferred on similar conditions to that of Bachelor of Medicine. The candidate has to pass ‘the previous examination,’ that is, the former of the two general University examinations, of which we have spoken ; to attend the lectures of the Professor of Law for the space of one year ; and to be examined by the Professor. He has also to keep ‘exercises’ in the law schools, similar to those of the medical student in his department.

No degrees in Divinity are conferred upon young men ; the lowest, that of Bachelor of Divinity, requiring the person to be a Bachelor of Arts of ten years standing. Nor is there, for the undergraduate students, any peculiar course of theological study insisted on *by the University*. But the gospels and the Evidences form, as we have said, part of the University course for all ; besides which, each College has its own regulations on this subject. The Norrisian Professor of Divinity delivers a course of lectures on doctrinal and historical theology ; and a certificate of attendance on this course is demanded by the Bishops, in most cases, as a condition of ordination.

There are no *compulsory* examinations in any other subjects than those we have mentioned ; the competitors for the Hebrew scholarships and prizes, as well as for various other University honours, being voluntary. But there are courses of lectures delivered by University Professors on most provinces of science. We have already mentioned those on physiology and medicine, anatomy, botany, chemistry : some of these are attended by many general students from choice, as well as by professional students. In addition to these, we may mention mineralogy and political economy ; and, more particularly, geology, natural and experimental philosophy, arts and manufactures, and modern history. The persons who at present lecture on the latter subjects are, Professors Sedgwick, Airy, Farish, and Smyth. These names are well known to the world : their lectures are delivered with care and zeal, and their auditors are numerous.

We may here also notice the courses of lectures of Professor Scholefield on Greek, generally delivered to a crowded audience; and those of Professor Lee on Hebrew and Arabic.

There are several teachers of modern languages in Cambridge, and some of them able men; but their formal connexion with the University is too slight to bring them particularly under our notice here.

It will be seen from what has been said, that the University system has undergone various modifications of late years. The establishment of the *previous examination* (that to which students are subjected in their second year) took place in 1822. The *classical tripos* (an honorary classification of those who, on taking the Bachelor's degree, distinguish themselves in classical studies) was also instituted in 1822. The introduction of classical subjects into the examination of those who are candidates for degrees dates only from the same year. Various modifications have been made in the examination for mathematical honours, especially some important ones in 1827, which are understood to have answered in practice, and are likely to be pursued still further, a *syndicate*, or committee, being at present in existence for that purpose. The University cannot reasonably be accused of having shown any extraordinary repugnance to change, nor any disposition to be too lax in its requisitions from the students. Many, indeed, have complained that there is too little of fixity in its system, and that a more rigid tenacity of existing rules would be more wise and proper; but the recent improvements have, on the whole, been made too gradually to lead to any serious inconvenience. Others have thought that the amount of the compulsory examinations is such as to leave too little time for voluntary studies. It certainly is a curious fact, illustrative of this tendency, that on the beginning of the operation of the previous examination in 1823, the audiences in the public lecture-rooms, for instance, in those of chemistry and modern history, immediately fell off very considerably.

What has hitherto been said refers to that portion of the institutions at Cambridge which we have called the University system, and which resembles that of most other universities, except that perhaps examinations occupy in it a larger share than they do elsewhere. But the other portion, the College system, ought by no means to be overlooked. It is at least equally influential with that which we have described; and we believe most of those who have studied its operation believe it to be the most beneficial part of a Cambridge education. The College course consists of lectures and examinations,

which are principally confined to classical and mathematical subjects. It is generally believed in the University, apparently with reason, that instruction on such subjects could be given only very superficially and imperfectly by the professorial system. A lecturer on the differential calculus, or on Thucydides, could do little in the way of carrying along with him an audience consisting of the whole or any large portion of one thousand two hundred undergraduates. The business of instruction is probably better conducted by the College system, where a tutor or lecturer has a class of twenty or thirty pupils, whom he can address collectively, and can also examine individually, so as to ascertain the degree of their attention and the nature of their difficulties. The personal acquaintance subsisting between teachers and learners so circumstanced, and likewise connected in various other ways, is held by the admirers of the English College system to be a great advantage. There is established under this arrangement a superintendence, capable of being used either to stimulate or to warn, which probably most of those interested in a youthful student would rather wish to have strengthened than weakened. At any rate this relation of the pupil to his College tutor is one of the most important and characteristic features in the education given at Cambridge.

The College lectures on the subjects of classics and mathematics will, of course, answer the purpose of assisting the student in preparing for the University examinations, since these latter turn on subjects of the same kind. But the more direct purpose of College lectures is to inform and direct the pupils with respect to certain other and additional examinations—the *College* examinations. These now take place in every College, we believe, generally at the end of the academical year. This universal prevalence of College examinations is another of the improvements of recent times: and as each examination in each College fills from ten to thirty sheets with printed questions, the University press is absolutely clogged with these documents at the period when the annual examinations in the Colleges take place; and a collection of them would form, every year, a considerable folio volume.

It may, perhaps, here occur to the reader, that there is a considerable waste of labour on the part of the persons who construct these question-papers, since the same questions might be used for the whole University. We do not think, however, that this view will, on a closer inquiry, appear well founded. There must, at any rate, be *many* fit examiners, in order to conduct the examinations usefully: and the fitness of an examiner consists in his being well informed on the

topics to which his questions refer. When he is so prepared, the construction of his questions costs little labour; the labour of examining the answers is considerable, but cannot be evaded, and can only be lightened by diffusing it over a large body. The *Fellows* are generally the examiners in their respective Colleges, and this is one of the most important functions of persons holding such stations. In electing fellows, in most, we believe in all the Colleges, reference is had to their fitness for the discharge of this office. In many cases a certain degree of eminence in the mathematical or classical *tripos* is insisted upon as an indispensable requisite in the candidate for a fellowship. And, in general, a superiority in these respects is considered in the light of a recommendation, except when the fellows are elected by a special examination held for the purpose, which is the case in the larger Colleges.

The annual College examinations differ from the University examinations in having for their subject certain selected works of ancient authors, and certain particular branches of mathematics for students of each particular standing. In his reading of the portions of ancient literature thus fixed upon, the student is directed to make himself master of the principal points of criticism, history, and antiquities which bear upon them, with the illustration which they may receive from other ancient authors, and various similar topics. We conceive there is much that is well calculated for the salutary discipline of the intellectual faculties of a young man, in this task of collecting from various quarters all that can throw light on a given limited field. In this employment he is assisted by his tutor or lecturer, who, generally with no small industry and zeal, communicates in his lectures the results of his own reading as applied to the author thus placed before him. English scholars are often accused of confining themselves too much to mere verbal criticism, and of neglecting those philosophical views of language, of taste, and of history which give to the study of ancient authors its highest value and greatest attraction. Perhaps all that can justly be demanded from teachers is, that they should transmit to their pupils the department of knowledge which they profess, in the best form in which it can be found among the common stores of literature. We trust, however, that a higher ambition, which has already shown itself among the scholars of Cambridge, that of appropriating all that is soundest and best in the widest speculations and deepest researches of the learned men of other countries, may be considered as likely to operate in future more widely and energetically than it has yet done.

The results of the annual College examinations, of which

we have spoken, are notified by an arrangement of the competitors into various classes, which are publicly exhibited in the particular college. The desire of honour and the fear of shame thus excited are motives very efficacious in calling out the talents and the exertions of students; and the preparation for these College examinations, alternately with the requisitions and incitements of the University system which we have described, are amply sufficient to occupy the powers of a large portion of the undergraduates in continued and instructive employment. For those who have activity and talents there are additional opportunities of exertion; for instance, declamation, essay, and verse prizes, and scholarships in College; and other competitions for similar objects open to the whole University, and consequently conferring much greater distinction on the successful candidate. The competitors for these honours are generally very numerous; and from the variety and frequent occurrence of these competitions, it may, and often does happen, that a person who brings to the University talents, scholarship, and emulation, spends his time in a perpetual succession of examinations and struggles. Many, no doubt, as may be imagined, are untouched by these incitements; but they do not escape the necessity of satisfying both the College and the University examiners.

Perhaps the most peculiar of the institutions of Cambridge is that of Fellowships. Those who are elected fellows of a College become possessed of a small stipend, of very various value in different instances; and in most Colleges they succeed in the order of their seniority to the choice of certain livings, as they become vacant. We have already said, that some of the resident fellows of each College execute the office of College examiners, and that they are generally chosen with a view to their fitness for this and similar offices. This, at least, is the case at present, in every, or almost every election at Cambridge; and every one, knowing any thing of the place in recent times, will be able to confirm this statement. The rule is followed so far, that it perpetually happens that the electors in the smaller colleges (the master or the fellows) adopt a more meritorious person from another College, passing over members of their own, who are judged less fit. This is more especially usual when they wish to obtain, as their new fellow, a person likely to fill with propriety the place of tutor, or assistant-tutor; for though it is not necessary that the tutor should be a fellow (there being instances to the contrary, and even cases where the assistant-tutor is a married man), it is undoubtedly a convenience to all parties that

the tutor should be a member ‘on the foundation’ of the society.

This practice of going beyond the limits of the College to procure a better tutor than can be found among the existing fellows, is extremely common. Sometimes the tutors so chosen are only Bachelors of Arts. The business of private tutor, one of considerable importance, is perhaps followed by Bachelors in greater number than by those of a higher degree. By the custom of private tuition the pupil receives the instruction and advice of his tutor, alone, during a certain time, generally an hour every day : the reputation of the tutor for scholarship, or for mathematical knowledge, is the circumstance which principally attracts pupils to him ; and one who has eminently distinguished himself is always much sought.

In the case of many of the fellowships in several of the Colleges, the will of the person who endowed these situations has limited the choice with certain conditions ; as for instance, that the holders shall come from certain counties, from certain schools, &c. These restrictions do not generally exclude deserving men, because prospects of this kind are taken into account in the selection of a College ; and a person who intends to be a candidate for a fellowship, looks out at first for a College in which there is an opening for him. The limitations are, however, in most cases productive of more inconvenience than good ; and a strong disposition has appeared in the Colleges themselves to get rid of these fetters, as far as the law will allow them to do so. In St. John’s, formerly much restricted, the fellowships are now thrown open to such an extent, that there is, in effect, scarcely any restriction or appropriation felt. This improvement was introduced by letters-patent from George IV., at the desire of the College. In those fellowships which have been founded by private persons, scruples are, very naturally, entertained as to the propriety of violating the directions of the founder.

The fellowships are of great use in supplying both the University and the Colleges with officers of various denominations requisite for the management of their affairs or their discipline, with tutors, public and private, with examiners, and also with a sort of academic public, which connects and mediates between the officers and the undergraduates. College Fellowships also have often afforded, and afford at present, the means of retirement and study to many persons who prefer such occupations to the struggles of professional or public life. It would hardly be too much to say, that these situations supply the only encouragement which this

country now offers to the cultivation of learning and mathematical science. A youth of narrow fortune, who has a strong bias to these studies, looks to a College-fellowship as the goal of his desires, and the means of cultivating his favourite pursuits; and if his desires are limited to this object, he rarely fails. If these institutions did not exist, such a person would have no resource but to turn in despair to the counter or the desk, leaving literature to those who can make it popular and gainful, and science to those who can make it useful for the ordinary purposes of life.

We have thus given a very brief sketch of 'the Cambridge System,' so far as its institutions are concerned; and if we have occasion again to resume the subject, we shall venture to suppose, that our readers have collected some notion of the various elements of which it consists, though these are generally found to be so numerous and so complicated as much to perplex inquiring foreigners, and to puzzle even Englishmen, who have not attempted to arrange in their minds any knowledge on those subjects which they may have acquired through relatives or acquaintances. This is not very surprising, when we consider that we have the pupil placed under various relations to his College tutor, often also to a private tutor, to College examiners, to University examiners, and, if he have any love of knowledge, generally to University professors; that there are employed, as means of instruction and regulation, not only lectures, examinations, and honours, but the superintendence of his tutors; and that besides this, certain matters of conduct and regularity are attended to by persons who are often, collectively speaking, called 'discipline officers'; namely, the deans in the College and the proctors in the University: when we consider, moreover, that the reward of the student may consist in his acquiring an interest in certain corporate property; that he thus may be led to the new employments and obligations which belong to a person 'on the foundation'; and that, connected with this institution, we have the phenomena of the common tables, the collected monastic dwellings, the college libraries and chapels, the academic groves and walks, the gowned and capped population, alike of pupils and of teachers, as well as the public library, the senate house, the lecture rooms, garden and museums, which elsewhere constitute all that a University presents to the eye of a traveller.

## NEW ENGLAND FREE-SCHOOLS.

THE subject of providing education for the whole community has already been discussed in this journal; and as the importance of the question can no longer be overlooked, we think it desirable to appeal to experience to aid us in forming a judgment. We, therefore, now refer to the only instance, where, as far as we know, the experiment has been fully and fairly tried—to the Free-school system in the New England States of North America\*.

Universal elementary education in Free-schools established by law, has been known in that part of the United States nearly two centuries. Of course, by this time, it may be reasonably supposed, that materials must exist there, from which we may form an opinion as to the value and efficacy of the system itself. If it has failed in that free government, it may well fail almost anywhere; if it has succeeded there, we may, perhaps, gather from the experiment, materials for promoting its success in other countries. But, we must first understand something of the circumstances under which it has arisen, and attained its present extent and character in New England itself.

The New England States are now six in number; Massachusetts being the chief of them; and constitute the northern and eastern portion of the United States of North America. They lie under a climate, where a severe winter prevails one half of the year; and this circumstance is, probably, favourable to the education of the labouring classes, since the inclement season, which suspends so many of their occupations, gives them at least the leisure needful for intellectual culture. But, on the other hand, the population, though it has increased and is increasing with enormous rapidity, is still a scattered population; and this circumstance is unfavourable to the progress of popular education, which, like all other moral ameliorations and benefits, is much dependent on the social principle, and is propagated and maintained with ease only in well-peopled neighbourhoods and communities. The New England States, whose capital is Boston, a city of about sixty thousand inhabitants, comprise a territory of more than sixty-six thousand English square miles, and constitute about one fourteenth part of the soil of the whole republic of the United States. Their population in 1830 was more than one million and nine hundred thousand, or about thirty souls on an average to each English square mile; but if it were as

\* We are indebted for this valuable communication to Professor Ticknor of Boston, Massachusetts, who states, 'that the facts here advanced are all unquestionable, and that the colouring is below the truth.'

dense as population is in France, there would be nine millions on the same soil ; and if as dense as it is in England, there would be about twelve millions. Taking then all these circumstances together, especially the large amount of the population, and the length of time it has been subjected to the effects of universal education, the experiment has probably been a fair one, and is likely to afford important results either one way or the other.

The history of this population, so far as our present purpose is concerned, is short. It goes back to the year 1620, when the first settlement of that part of America was begun at Plymouth. The people are almost entirely of English descent, and in their language and characteristics more homogeneous than the population of England itself; since they have hardly any varieties of dialect or personal qualities by which the inhabitants of the different states can be distinguished. For a long time they were nearly all Puritans, who in the reigns of James I. and Charles I., left their native country to enjoy unmolested the rights of conscience. Many of those who thus emigrated were men of property. Many of them had received the best English training and education\*. All of them were high-minded men, full of moral daring, and a stern courage; eager to sacrifice everything to what they esteemed the true faith, and the genuine practice of Christianity. Their church government, their civil polity founded on it, all their institutions, indeed, were essentially popular from the first, and have remained so ever since.

Among the popular tendencies in these earliest settlers, none was more marked or original in its character, than the tendency to make *education universal*, an idea which, so far as we know, had then been neither acted upon nor entertained elsewhere. The first hint of this system—the great principle of which is, that the property of *all* shall be taxed by the *majority* for the education of *all*—is to be found in the records of the city of Boston for the year 1635, when, at a public or body meeting, a schoolmaster was appointed ‘for the teaching and nurturing children among us,’ and a portion of the public lands given him for his support. This, it should be remembered, was done within five years after the first peopling of that little peninsula, and before the humblest wants of its inhabitants were supplied; while their very subsistence from year to year was uncertain; and when no man

\* It is made apparent by Mr. Savage, the accurate and learned editor of Winthrop's Journal, that in 1638, there were in New England, in proportion to its population at that time, as many graduates from the two English Universities, as there were in England proper.—Vol. ii. p. 265, note.

in the colony slept in his bed without apprehension from the savages, who not only everywhere pressed on their borders, but still dwelt in the midst of them.

This was soon imitated in other villages and hamlets springing up in the wilderness. Winthrop, the earliest governor of the colony, and the great patron of Free-schools, says in his journal under date of 1645, that divers Free-schools were erected in that year in other towns, and that in Boston it was determined to allow for ever 50*l.* a year to the master with a house, and 30*l.* to an usher. But thus far only the individual towns had acted. In 1647, however, the colonial Assembly of Massachusetts made *provision by law*, that every town in which there were fifty families should keep a free-school, in which reading and writing could be taught; and every town where there were one hundred families should keep a school, where youth could be prepared in Latin, Greek, and mathematics, for the College or University, which in 1638 had been established by the same authority at Cambridge. In 1656 and 1672, the colonies of Connecticut and New Haven enacted similar laws; and from this time, the system spread with the extending population of that part of America, until it became one of its settled and prominent characteristics, and has so continued to the present day.

This system of universal education has now therefore become, to a remarkable degree, the basis of the popular character, which marks the two millions of people in New England. The laws, indeed, differ in the six states, and have been altered in each from time to time since their first enactment; but all the states have laws on the subject; the leading principles are the same in all of them; and the modes of applying them, and the results obtained, are not materially different. Indeed, in almost every part of these six states, whatever may be the injunctions of the law, the popular demand for education is so much greater, that the legal requisitions are generally or constantly exceeded. The most striking instance of this is, perhaps, to be found in the city of Boston, where the requisitions of the law could be fulfilled by an expenditure of three thousand dollars annually, but where from sixty to seventy thousand are every year applied to the purpose. And yet multitudes of the poor and small towns in the interior show no less zeal on the subject, and in proportion to their means make no less exertion.

The mode in which this system of popular education is carried into effect is perfectly simple, and is one principal cause of its practical efficiency. The New England States

are all divided into small territorial communities called *towns*, which have corporate privileges and duties, and whose affairs are managed by a sort of committee annually chosen by the inhabitants, called *select men*. These towns are of unequal size; but in the agricultural portions of the country, which contain four-fifths of the people, they are generally five or six miles square, and upon them, in their corporate capacity, rests the duty of making provision for the support of free-schools. This duty is fulfilled by them in the first place, by voting at a meeting of all the taxable male inhabitants over twenty-one years old, a tax on property of all kinds to support schools for the current year, always as large as the law requires, and often larger; or if this is neglected by any town, it is so surely complained of to the grand jury by those dissatisfied inhabitants, who want education for their children, that instances of such neglect are almost unknown. The next thing is to spend wisely and effectually the money thus raised. In all but the smallest towns, one school at least is kept through the whole year, in which Latin, Greek, the lower branches of mathematics, and whatever goes to constitute a common English education in reading, writing, geography, history, &c. are taught under the immediate superintendence of the *select men*, or of a special committee appointed for the purpose. This, however, would not be carrying education near enough to the doors of the people in agricultural districts to enable them fully to avail themselves of it, especially the poorer classes and the younger children. To meet this difficulty, all the towns are divided into districts, varying in number in each town from four to twelve, or even more, according to its necessities and convenience. Each district has its district school committee, and receives a part of the tax imposed for education; sometimes in proportion to the population of the district, but oftener to the number of children to be educated. The committee of the district determine where the school shall be kept, select its teacher, choose the books that shall be used, or delegate that power to the instructor, and in short are responsible in all particulars for the faithful fulfilment of the trust committed to them; the general system being, that a school is kept in each district during the long winter months when the children of the farmers are unoccupied, by a male teacher capable of instructing in reading, writing, arithmetic, English grammar, geography and history; while in the same school-house, during the summer months, schools are kept by women to instruct the smaller children in knowledge even more elementary. In this way, for the population of New

England consisting of two millions of souls, not less than from ten to twelve thousand free-schools are open every year; or on an average, one school to every two hundred souls; a proportion undoubtedly quite sufficient, and larger than would be necessary, if the population were not in many parts very much dispersed.

The beneficial effects of this system are such as might be expected, and are in general sufficiently obvious. The security of life and property is greater in New England than it is anywhere else in the world, by far the larger part of the inhabitants sleeping constantly with doors neither barred nor bolted. The intelligence of the people is greater, on an average, than anywhere else; not one in a thousand of those born and educated in New England being unable to read and write. The pauperism in the native population is almost nothing. Indeed the industry, order, wealth, and happiness, which so generally prevail there, which have so greatly increased during the last half century, and which are still so rapidly increasing, rest, under Providence, for their basis, mainly on the elementary education given to all in the free-schools.

But besides these obvious and wide effects of the system of universal education, there are others, which have been incidental and unexpected, and which can, perhaps, be fully understood only in connexion with the circumstances that produced them, and the principles on which they depend. One of the most remarkable of these is the readiness with which the inhabitants of each town vote and raise the money necessary to support their schools. The reason is, that it is raised by a tax on property, and therefore operates as a benefit to the majority of those who vote for it. In most towns of New England, one-fifth of the inhabitants pay, at least, one-half of the tax; and probably do not send more than one-sixth of the scholars. Of course, the school-tax is, to a considerable extent, a tax on the richer classes to educate the children of the poorer; and yet, as all pay in proportion to their means, the poorest man feels that he has done all he ought to do to purchase the benefit which he receives, and he therefore claims it, like the protection of the state, as a right, instead of receiving it as a favour. And this is as it should be. Every man in the community has an interest, that ignorance, vice and barbarism be kept out of it, and a claim on the commonwealth that they should be. In New England, if he be poor, he has the promise of the law, that his child shall be educated, and thus preserved from the greatest temptations to degradation and crime; if he be rich,

he is promised by the same law, that he shall live in a community, where universal education shall keep the foundations of society safe, and afford him a personal security greater than that offered by the terrors of prisons and tribunals of justice. The system of free-schools in New England, therefore, is to be regarded, and is there regarded, as a great moral police wisely supported by a tax on property, to preserve a decent, orderly, and respectable population; to teach men, from their earliest childhood, their duties and rights, and by giving the mass of the community a higher sense of character, a more general intelligence, and a wider circumspection, to make them understand better the value of justice, order, and moral worth, and more anxious and vigilant to support them.

On this point no one has spoken with so much power as Mr. Webster, now the first statesman in New England, and probably in the United States, who, alluding in public debate to their free-schools, where he himself received his earliest training, said:

'In this particular, New England may be allowed to claim, I think, a merit of a peculiar character. She early adopted and has constantly maintained the principle, that it is the undoubted right, and the bounden duty of government, to provide for the instruction of all youth. That which is elsewhere left to chance, or to charity, we secure by law. For the purpose of public instruction, we hold every man subject to taxation in proportion to his property, and we look not to the question, whether he himself have, or have not, children to be benefited by the education for which he pays. We regard it as a wise and liberal system of police, by which property, and life, and the peace of society are secured. We seek to prevent, in some measure, the extension of the penal code, by inspiring a salutary and conservative principle of virtue and of knowledge in an early age. We hope to excite a feeling of respectability, and a sense of character, by enlarging the capacity, and increasing the sphere of intellectual enjoyment. By general instruction, we seek, as far as possible, to purify the whole moral atmosphere; to keep good sentiments uppermost, and to turn the strong current of feeling and opinion, as well as the censures of the law, and the denunciations of religion, against immorality and crime. We hope for a security, beyond the law, and above the law, in the prevalence of enlightened and well-principled moral sentiment. We hope to continue and prolong the time, when, in the villages and farm-houses of New England, there may be undisturbed sleep within unbarred doors. And knowing that our government rests directly on the public will, that we may preserve it, we endeavour to give a safe and proper direction to that public will. We do not, indeed, expect all men to be philosophers or statesmen; but we confidently trust, and our expectation of the duration of our system of government rests on that trust, that by the diffusion of general knowledge and good and virtuous sen-

timents, the political fabric may be secure, as well against open violence and overthrow, as against the slow but sure undermining of licentiousness.'—*Journal of Debates in the Convention to revise the Constitution of Massachusetts*, 1821, p. 245.

Another benefit, which was not foreseen when free-schools were first introduced, and which, like the last, both facilitates their extension and ensures their permanence and efficacy, is the great interest they excite, and the consequences that follow it. By the mode in which they are managed, the whole population is led to take an interest in them; and each individual, as it were, is called on to assist in carrying forward some one school in the way best suited to the wants of his family and neighbourhood, as well as to the universal demand. The people, in their town meetings, vote the money for the schools; the people, by their district committees, spend the money they have raised; and the people, by their own children, get the benefit of the money. It is, indeed, the people's affair from beginning to end; the *whole* people's affair: and as it is one that comes home every day to their notice, supervision, and wants in the daily education of their children in the very schools where they were themselves taught, it is sure to be understood, and equally sure not to suffer materially from neglect. The committees will not fail to get as good teachers as the money entrusted to them will procure, that their judgment may not be disparaged among the little body of their constituents; they will have the schools as numerous as they can afford, that none of the children may be kept from them by distance; and the people themselves, feeling they have thus paid for the instruction, are sure to claim the benefit of their own sacrifices by sending their children to get it. Popular education has thus long been the most important subject that occupies and agitates the little villages and neighbourhoods of New England; and this stir, this interest, this excitement about it, constitute a more watchful superintendence, and produce a more sagacious adaptation of the means to the end, than could result from any apparatus devised for the purpose by the government, or any other interference of the constituted authorities of the state. One of the most important effects then of the New England system of free-schools is, that it has developed this strong popular interest, and made it an effectual agent in popular education.

Another indirect, but more obvious benefit arising from this system is, that it gives an upward tendency to the whole population. It gives the first means of intellectual culture to all, and, with the use of these means, there comes inevitably, in more ingenuous minds, the desire to rise. It is

true, the state does little more than give this first impulse and opportunity; but the people, sometimes with, and sometimes without the assistance of the state, create everywhere the rest for themselves. New England, besides eleven *colleges*, which are chartered institutions offering the best education America yet affords, possesses not less than one hundred and fifty chartered *academies*; a sort of *gymnasia* between the free-schools and the colleges, often founded or assisted in their foundation by the state, from which few young men of promise are excluded, and where they receive, certainly not a thorough classical or scientific training, but still one that fits them to be efficient, practical men in the concerns of the world. In this way many are led onward step by step, almost without being aware of it, from the free-schools, through the academies, the colleges and the studies of a profession, until at last they find themselves suddenly standing, they hardly know how, on the very threshold of life, and entering the most important places in society. The benefits arising from this effect of the free-schools of New England are undoubtedly more wide and important than could have been anticipated, and are every day increasing. Many persons in that country are now distinguished in the learned professions, and in the management of the state, who, but for the means offered them in the free-schools of their native villages, would never have emerged from the humble condition in which they were born.

The last benefit of this system, which is becoming every day more and more perceptible, is that it is certainly the safest, and perhaps the only safe foundation on which to trust the popular institutions of the country. In a government where the people hold *practically* the sovereign power, and where they meet repeatedly every year in their small communities to exercise that power in matters of moment; where the most important offices in the state are filled *annually* by *universal* suffrage, and where the very elements and action of the constitution are, from time to time, submitted to the same test, it is plain there can be no ultimate security for liberty or property, so deep or so effectual, as a universal education, which shall cultivate the moral sense of the whole people, and, by instructing them in their own rights, make them wise enough to respect the rights of others. Such an education is to be supported by law, on the same principle on which the administration of justice is supported by it; and can be defended at least as successfully as church establishments for the religious instruction of the people. But it goes deeper and broader than either of them. It lays the foundation not only for the religious instruction of the

whole people, but for their instruction in all their rights and duties as men and citizens.

On the whole, therefore, the experiment of subjecting the property of all to taxation for the purpose of giving the first elements of education to all, which has now been going on in New England for nearly two centuries, must be considered as having been fairly tried and eminently successful. Success, too, has had its natural effect, and has produced, and is producing, imitation. The other states of the American republic, though education has always been greatly encouraged and widely spread among them, have of late shown renewed anxiety in relation to it; and many have already begun by legislation to attempt to place it on the same ground on which it has so long stood in New England. Indeed the idea seems more and more to prevail throughout the whole republic, that all popular institutions of government can only rest safely on some similar system of education, protected by law and founded on property.

But the introduction of such a system, whether into those parts of the United States where it does not yet exist, or into other countries where it is entirely unknown, must, in order to produce all its good effects, be gradual, as must any change intended to reach and affect the character of a whole people. For such a change cannot be brought about by the enactment of a statute, or the providing a fund. It can be brought about only by gradually interesting the whole population in it; by making each town, each village, each neighbourhood assist in it, contribute to it, and superintend and watch it, as a private interest of their own, which they will not trust out of their own hands. They must feel too, that it is not a charity, or a favour granted to them by others, or sent down from their ancestors, but a right purchased and paid for by themselves, to which they have as clear a claim, as they have to the protection of the laws or the offices of religion. This is, of course, the work of time, of habit, and of experience. The statute book can no more do it, than it can compel a man to manage his own business skilfully, or regulate his household with discretion. It is, therefore, only where popular education has been the anxious care of the people, until it has become to them as a personal interest or a domestic want, that we can expect from it the wide practical results in the character and condition of a country, which it is undoubtedly, at last, able to produce.

## REVIEWS.

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*Beschreibung der Stadt Rom von Ernst Platner, Carl Bunsen, Eduard Gerhard, und Wilhelm Röstell.* With Contributions by B. G. Niebuhr, and a Geognostic Essay by F. Hoffmann. Illustrated by Plans, Elevations, and Views, by the Architects Knapp and Stier, and accompanied by a separate Collection of original Documents and Inscriptions, by E. Gerhard and Emiliano Sarti. Vol. i. 8vo.

THE volume before us forms the introductory part of a work which, whether we consider the nature of the subject, or the distinguished names associated in the undertaking, and the time and labour that have been dedicated to it, claims the attention of all who take an interest in ancient literature and history. A worthy description of Rome, though it may be most attractive to those who have visited the Eternal City, and who would revive and recollect the images it once called up in their minds, or to those who hope to enjoy that happiness, and who wish their steps to be guided and their eyes armed for a discerning contemplation of that marvellous scene, is not less valuable for those whose conceptions of the subject must be formed entirely from secondary sources. The origin and history of this important work are related by the editor, Mr. Bunsen, in a preface which also contains a critical notice of the literature appertaining to Roman topography, including every production of any note in this field, from the time when it first began to be cultivated in the middle ages to the present day, with a general outline of the proposed nature, plan, and arrangement of this book. It grew, like its vast theme, out of a very diminutive beginning. Its original design extended no further than to a remodelling of Volkmann's German compilation from Lelande's *Voyage en Italie*. The publisher Cotta, during his stay at Rome in the winter of 1817, engaged Mr. Platner, whose studies had long been directed to the history and arts of Italy, to undertake this task, commencing with that volume of Volkmann's work which contained the description of Rome. Niebuhr, who was then Prussian envoy at the Papal court, promised his assistance in superintending the antiquarian part, and the present editor, who was then secretary to the legation, offered a contribution to illustrate the Christian monuments of Rome.

Before long, however, it became evident that the basis which had been chosen for the work was too slight and narrow, and that it would be impossible, without inconvenience, to adhere even to the arrangement of the original. Its defects were rendered more glaring by the contrast between its execution and some essays furnished by Niebuhr, which contributed mainly to determine the scale and character of the new plan. As with the enlargement of its dimensions every part acquired greater separate importance, a more complete division of the labour became desirable ; and Platner resigned the head of Pagan antiquities, together with the general duties of editor, to Bunsen, in order to devote himself entirely to his favourite pursuit, the investigation of Rome's Christian antiquities, and the description of its modern works of art.

In the spring of 1823 Niebuhr left Rome, and was succeeded in his diplomatic station by the editor, to whom however he had previously communicated the results of his inquiries into several of the most difficult and important questions of Roman topography, so that this work will represent his views on the most obscure and interesting points of that subject. In announcing a fact which so greatly enhances the value of the book, Mr. Bunsen acknowledges his general obligations to his friend, in language which does no less honour to his feelings, than to the lamented person who is the subject of it. He declares that, ‘whatever there may be in his antiquarian researches deserving the approbation of intelligent judges, and useful in promoting the knowledge of Roman antiquity, may be ascribed more justly to the guide of his philological and historical studies ; to the friend who, with paternal kindness, had opened to him the inexhaustible stores of his learning, than to himself. For, he adds, if it is not always founded on materials which he has communicated, still it has certainly been suggested by his hints, or directed by his master-eye which nothing escapes, or corrected by his all-comprehensive knowledge.’ We may add, that though the names of the other contributors are not all equally familiar to the English public, they are men of high, some of the highest reputation in their respective departments, and that, if they had not been before known, the specimens contained in this volume would sufficiently prove the ability of the authors to carry on the work in a manner worthy of the great auspices under which it has been begun.

The editor concludes his critical review of the labours of his predecessors by observing that the literature belonging to the description of Rome, if it were to be collected in a Thesaurus, would fill not less than seventy folio volumes, and

that nevertheless the reader who should have the courage to explore this huge mass, would not find in it a complete description or enumeration of the antique buildings, nor an historical and critical examination of all the churches, nor even a complete catalogue of the Vatican Museum. The modern additions that from time to time are made to this formidable pile, commonly aim at exhibiting the subject in a more popularly attractive form than it presents in the elder authors, who did not affect to disguise or set off their erudition by any adventitious ornaments. Hence the learning, which, in the old books, if dry, was concentrated and condensed, is diluted in the new to suit different or more delicate tastes ; and while the bulk of the topographical literature is enormously expanded, the ends of instruction and amusement are both very imperfectly answered. A work was still wanting, which, in a comparatively narrow compass, should embrace a more comprehensive outline and more complete details, than are to be found in any that has yet appeared on the subject : and this is the void which the authors of the present description have endeavoured to supply. Their task, involving the two opposite processes of enlargement and compression, demanded undoubtedly no ordinary degree of industry and judgment ; but what we see before us inspires us with great confidence in their success, and we believe, if the room that in other similar cases might be saved from minute and frivolous erudition on the one hand, and from declamation on the other, were carefully and judiciously husbanded, many ponderous collections might be reduced to an equally portable size, not only without any loss, but with a considerable increase in their real value.

The work consists of two parts, one general and preliminary, which is contained in the present volume : in the other part, a separate book will be devoted to each of the topographical masses into which the city will be divided for the purpose of description, so as to enable the reader, as he proceeds, most easily to combine its features in one comprehensive view. The physical character of each district, and the history of its occupation and its fortunes, will be described in an introduction prefixed to each book. The whole will be illustrated by two large maps : one of these will be reduced from Nolli's great map of the modern city, accompanied by one, on the same sheet, of the country round in a circle of three miles diameter, and by a smaller geological map founded on Brocchi's, but enriched with a section of the Roman strata by Hoffmann. To this will be added three small maps, representing the city in the reign of Ser. Tullius, the walls of

Aurelian and the regions of Augustus, and the modern *Rioni*. The second large map will be on a new and peculiarly interesting plan. It will exhibit an accurate view of the natural inequalities of the ground : in this outline will be inserted Bufalini's plan made in 1551, according to Nolli's reduction ; and the modern streets, represented by fainter lines, will afford the means of comparing the city as it now appears, with Rome as it stood in the sixteenth century, before the sweeping changes made by Sixtus V., Paul V., and other popes. All the ruins of ancient Rome still preserved, as well as those marked by Bufalini, which have disappeared since his time, and the course of the walls of Servius, will be shown in this map, and the ruins now no longer visible will be distinguished by peculiar marks, and referred to their exact position ; a work of great labour, undertaken by the architect Stier, which will be of incalculable use in determining the points where excavations may hereafter be made with a reasonable prospect of important discoveries, and at all events without any material waste of time and labour.

The whole work will not exceed five volumes, but the last will be accompanied by a separate collection of documents relating to Roman topography, consisting partly of the treatises of the Regionarii and other authors, who have described the state of the city in the middle ages as eye-witnesses, and partly of passages extracted from ancient and modern writers, and of inscriptions, proving particular topographical facts. A critical introduction by Sarti will communicate some important discoveries on the sources of the early topography. Another small volume, distinct from the main work, but forming a natural and interesting appendix to it, will contain an anthology of Roman inscriptions.

We must now turn to the first part, the plan of which is explained in a preliminary article by the editor. It consists of four books. The first is the physical introduction, designed to give a general view of the principal facts connected with the distribution and the nature of the Roman soil, and with the quality of the air. This very important and interesting branch of the subject had been almost entirely neglected in all preceding descriptions of Rome ; and indeed it has been only since the beginning of the present century, that Roman geology has received the attention which its remarkable phenomena so well deserve, both on their own account, and on account of their connexion with the early history of the city. The second book, containing the historical introduction, is devoted to the review of the principal vicissitudes through which the city has passed from its foundation to the return of

Pius VII.; to the examination of its condition at the most important epochs in this period, and to a critical inquiry into the sources from which our knowledge of its history is derived. The third book introduces the reader to the history of the arts, so far as it is connected with the monuments and works which are subjects of the description. This comprehends only one period in the history of ancient art, and that not the most interesting; but of Christian art Rome may be regarded as the cradle and chief theatre, as the place where its first efforts and its most brilliant triumphs, and the signs of its languor and decay, all meet the eye together: and hence an outline intended to prepare a stranger to appreciate and enjoy the various classes of its productions, must include every stage of its rising and sinking fortunes. The fourth book, the introduction to the topography, describes the origin and successive enlargement of the fortifications of the city.

It will be evident from this sketch of its plan, that the present volume embraces a great number of highly interesting subjects. It would be impossible, without far exceeding the necessary limits of this review, to afford to all of them space sufficient even for a brief notice of the most important investigations belonging to each head. In selecting those to which we must confine ourselves, we shall be guided not so much by their intrinsic value, as by their connexion with the general design of our journal.

We may presume that most of our readers are familiar with the site of Rome; yet as the same object may be viewed in various lights, it may not be useless for our present purpose to observe, that in its course through the city, a tract of a little more than two miles in length, the Tiber makes three great bends of nearly equal compass. It first approaches Mount Pincio, receding from the hills on its right bank, the Mounts Mario and Vaticano, which together make a semi-circular sweep, inclosing with the elbow of the river the Vatican Field, a level about a mile long terminated toward the south by the northern foot of the Janiculus. The bay contained between the second bend of the river and the hills on the left, which at the same time make a slight turn in the opposite direction, is the Field of Mars, the site of the chief part of the modern city. It is bounded to the south by the approach of the river toward the foot of the Capitol. The long straight ridge of the Janiculus, running from north to south, forms the chord of the third arc, which incloses the district of Trastevere. This tract is connected by a narrow strip with the Vatican Field, and ends toward the south, where the Janiculus again meets the river. Of the seven hills on

the left bank, four, the Capitoline, Palatine, Aventine, and Cœlius, are insulated heights; but the other three, the Quirinal, Viminal, and Esquiline, are promontories that jut out toward the Tiber from one long range, and are only separated from each other by narrow gorges running up into it. This common range, which in many points ends very abruptly on the side of the river, sinks, by an extremely gentle slope, into the plain which stretches from it to the foot of the Apennines.

The geognostical features of the memorable district just described, are the subject of an interesting chapter by Professor Hoffmann of Berlin, who has collected the most important observations of Breislak, Leopold von Buch and Brocchi on the nature of the Roman soil, and has added a general view of the geological conclusions that result from them. The most instructive details are due to the labours of the industrious and intelligent Brocchi, whose delightful work, *Dello stato fisico del suolo di Roma*, is the best guide for one who wishes to investigate the subject. Our object here will of course be only, within the space we can spare, to communicate what may be generally intelligible and interesting to our readers. The facts brought under review belong to three classes: proofs of inundation, marine and fluviatile, and of volcanic agency. The first in order of time are the traces of the sea that once covered the site of Rome. These are most conspicuous in the structure of the hills on the right side of the river; in Monte Mario, the summit of which is covered with sea shells; in the sandstone and marl of the Vatican (the material of the Roman potteries), which abounds, more especially the marl, in marine, animal, and vegetable remains. In the ground opened some years back for the foundations of a new saloon in the Museum Pio Clementino, a bone was discovered which Brogniart held to be the metatarsus of a palæotherium. The Janiculus, which is, in fact, a continuation of the same ridge with the Vatican and Monte Mario, interrupted only by some little glens, exhibits similar formations. A fountain of oil is said to have burst out from the side of this hill in the eighth century of the city; and Brocchi thinks it probable that a stream of petroleum may have issued from the marl, as it is the same soil which still gives rise to bituminous springs in the territory of Modena and of Parma.

The effects of volcanic action are most prominent on the opposite side of the river, among the seven hills and in the adjacent plain at the southern extremity of the city. These hills are mainly formed of huge masses of tufa, in which

Brocchi distinguishes two species, both manifestly of igneous origin, but differing in their composition and texture:—  
1. *tufa litoide*, a hard stone, probably the *lapis quadratus*, used by the Romans for paving, and the material of the *Cloaca Maxima*, and of the inner part of the substructions of the *Tabularium*; it constitutes the bulk of the Capitoline hill;—2. *tufa granulare*, a light and very friable substance, so called from the coarse ill-compacted grains of which it is composed, together with other fragments, including small lumps of dark grey lava. It is unfit for architectural purposes, but is used near Velletri for bricks, and appears to have been employed in ancient times for sepulchral urns, as it still is for other vessels. This tufa, which has arisen from the disintegration of the porous pumicelike lava, called by the Italians *lapillo*, is more widely diffused than the lithoidal tufa, and forms the main mass of the Pincio, the Quirinal, the Viminal, and the Palatine. But the most important fact regarding its position is, that, on the heights to the right of the river, it is found overlying the above described marine formation; on the summit of the Vatican, in a bed six feet thick, containing among others small fragments of peperino and basalt, and surmounted by a layer of very light pumice-stones, as big as walnuts, which have been traced to a considerable distance. The same tufa appears on the top of the Janiculus, with large pieces of pumice imbedded in it; and the same strata extend to the summit of Monte Mario. On the left side of the river, the only instance of a similar superposition was discovered by Brocchi under the Tarpeian rock, where the lithoidal tufa at the summit covers a bed of granular tufa, which, in its turn, rests on a mass of sand and clay. This last Brocchi conceives to be a marine formation; and from observations made on the wells in this part of the city, he concludes that the real basis of the seven hills is a continuation of the marine formation on the right bank of the Tiber. Finally, fresh water deposits, abounding in organic remains, occur high above the present level of the river; on the Esquiline at the height of one hundred and forty feet, resting on a bed of tufa. The most important and interesting of these deposits, as well on account of its character as of its architectural uses, is the travertino. It is particularly conspicuous on the hills of the left bank: on the Aventine, at a height of ninety feet above the surface of the river, it forms a horizontal bed, which may be traced to a distance of half a mile without interruption. Here it is seen resting on alluvial sand, which itself covers the volcanic tufa of the same hill. A still more remarkable phenomenon occurs on the Pincio, and in the

tract between that hill and the Ponte Molle, where the tufa is found incumbent on vertical beds of travertino, and likewise containing fragments of that stone, as is also the case on the Janiculus.

The facts we have thus briefly noticed suggest the following general conclusions. The marine deposits first described, the hills on the right bank of the Tiber, the oldest basis of the Roman soil, belong to a very extensive tertiary formation, to which Brocchi has given the name of the sub-Apennine hills, and which, as he has shown, begins in the territory of Lucca, and stretches along the western coast of Italy, with few interruptions, as far as Reggio in Calabria. The fragments of the older rocks, which form the sandstone and conglomerate of the Janiculus and the contiguous ridges, were brought down by the sea from the neighbouring Apennines, and the inequalities thus produced determined the course of the Tiber. The products of volcanic agency appear everywhere above this formation, never inclosed in it, and thus are proved to belong to a later period. Rome itself lies between two of the most important points in the volcanic line, which has been traced without interruption from the borders of Tuscany to Campania—the extinct craters of the Monti Cimini, between Viterbo and Bolsena, toward the north, and those of the Alban range to the south. That the volcanic rocks of the Roman hills had issued from one of those vents has been generally admitted: for an hypothesis of Breislak, according to which the Forum itself had been the crater that sent them out, is refuted, not only by the aspect of the ground, but by the decisive fact, that the tufa of this region is not lava, as appears clearly both from its composition and its regular stratification. The Alban hills might, at first sight, have seemed the centre to which it might most naturally be referred; but more accurate inspection has proved that their volcanic productions were of a different kind, not comprising either the lithoidal tufa or pumice, while, on the other hand, their peperino is scarcely to be found at Rome. But the Monti Cimini, and the hills round the Lago di Bracciano, appear to have discharged exactly similar substances, which strew the whole tract between them and the city, and are not found further south.

Brocchi and L. v. Buch agree in believing that the Roman tufa owes its present appearance to the action of water; but they differ on the further question, whether the effect was produced by the sea or by the river. The superposition of beds of tufa on regularly stratified travertino, which occurs in almost all the hills of Rome, led the latter geologist to

conceive, that the formation of these two very different rocks was nevertheless simultaneous. Brocchi was led to the opposite conclusion, by observing the great extent to which the Roman tufa is spread over the volcanic zone of Italy, being continued regularly from the hills near Santa Fiora, in Tuscany, to the plains of Campania, and thus inferring a corresponding diffusion of the waters which deposited it. It also occurs in islands and tracts that are either entirely destitute of fresh water, or very scantily supplied with it, as Ischia, Procida, Lipari, and the Valle di Noto, in Sicily. This opinion receives still stronger confirmation from the remains of marine animals, that are found at considerable heights inclosed in the tufa. And as the Italian volcanoes, since they have ceased to be covered by the sea, have never produced similar masses, Brocchi thinks it certain that the old tufa was either thrown up from submarine volcanoes, or, at all events, was received and carried along by the sea, and he explains the perplexing phenomenon which prevented Von Buch from taking the same view of it, by supposing that the tufa, which now either rests on beds of travertino, or contains fresh water productions, is no longer in its original state, but had been decomposed, and removed from its primary site, by the same streams which brought down the elements of the travertino, and afterwards had been cemented again by chemical agency; and he, therefore, distinguishes the tufa, which he imagines to have been so formed, by the name, *tufa ricomposta*, though it is only by the circumstances of its position that it can be discriminated from that which he terms *tufa originale*.

After the sea that once rolled over the Roman Campagna had retired nearly within its present bounds\*, and the internal convulsions of the earth had for a time subsided, a period ensued, the traces of which are distinctly visible in the last of the three formations above described—a period during which the Tiber must have formed a lake on the site of Rome, more than one hundred and thirty feet higher than its present surface, and differing widely from the river as it now flows, both in the nature of its mineral deposits and in its organic contents, which were such as belong either to stagnant waters or to very sluggish streams. On the other hand, signs also occur of a state of violent agitation interrupting this period of repose, in numerous large masses of conglomerate, which are found at considerable heights resting

\* In speaking of the retreat of the sea, we only mean to describe a fact, without expressing any opinion as to its cause, which geologists are now generally agreed in referring to the elevation of the land.

on the travertino. The Tiber is no longer able to bring down to Rome fragments such as compose these masses: it deposits its coarser gravel at a distance of thirty miles, and the finer at twelve above the city, and thenceforward, to its mouth, is only charged with the fine yellowish sand from which it derived its constant epithet:—

*In mare cum lava prorumpit Tibris arena.*

Whether the gradual retreat of the sea, or a sudden and violent convulsion put an end to this period, and laid the basin of the river open for the habitation of man, is one of the secrets which will perhaps always elude the researches of scientific inquirers.

The physical introduction concludes with an essay by the editor on the quality of the Roman air: a subject which as connected, on the one hand, with the nature of the soil, and, on the other, with the history of its population, could not have been introduced in a more appropriate place. The great questions which have divided the opinions of Italian and foreign men of science on this most interesting point are, whether the pernicious effects commonly attributed to the air of the city and the Campagna do really and exclusively arise from it; and if so, what are the precise causes and the possible remedies of the evil? Some writers contend, that the actual malignity of the air is chiefly owing to adventitious causes, depending on the want of proper cultivation of the soil, and tending to produce the putrefaction of organic substances and the consequent emission of deleterious gases, and that it might be corrected by a judicious system of draining and planting, and otherwise sheltering the country from the influence of such causes. A Milanese professor, Moscati, believed that he had detected the base of the noxious vapours exhaled from the rice-grounds of notoriously unhealthy districts, in a mucous substance, which floated on the surface of the fluid, obtained by condensing such vapours. Brocchi was induced by this report to institute a similar experiment at Rome, and for this purpose he boldly passed four nights in the month of September at the basilica of S. Lorenzo *fuori delle mura*, one of the most unhealthy spots in the neighbourhood of the city, at a time when the convent was deserted by all its clerical inmates, except a single priest, who was left in charge of it, to struggle as well as he could with a tertian fever. Brocchi has given an amusing description of his operations in a memoir annexed to the above-mentioned work, which is accompanied by another, *Sulla condizione dell' aria di Roma negli antichi tempi*. His experiment failed to exhibit the phenomenon described by

Moscati; but he candidly acknowledges that it is not conclusive, as the quantity of the fluid employed might not have been sufficient, or the subtlety of the noxious principle might have eluded his analysis. His opinion however is, that no agricultural methods can ever entirely extirpate the noxious quality of the air, as it depends chiefly on the unalterable features of the Campagna, the inequalities of which must, he conceives, always oppose an insuperable obstacle to any effectual drainage. But he believes that the evil might be so far mitigated, by recurring to the practice of the ancients in wearing woollen clothes next the skin, that the desolate region which, for so many ages, has been abandoned by almost every sign of human life, might again be peopled by a healthy and robust race. The change of fashion in this respect, which began even in the time of Augustus, he is inclined to consider as the most truly dangerous *aria cattiva*, since it has deprived the modern Romans of the safeguard which protected their ancestors, whose pores were screened by their heavy but useful togas from the germs of disease floating in the atmosphere, and without this precaution always liable to be absorbed into the animal frame, but more particularly during sleep, when the cutaneous organs that admit them are known to be most active. He also thinks that chlorine might be successfully used as a preservative or a remedy.

The facts and reasonings stated by Mr. Bunsen show that the truth does not lie exclusively on either side. The Roman fever appears to differ only in degree from that of the West Indies, where it has been observed that heavy rains render marshy grounds healthy, while they have the contrary effect on districts that were before dry, though no putrefaction of animal or vegetable matter could have taken place. Hence it has been inferred, that this latter cause does not produce the Roman malaria, and that it does not even arise from stagnant water, but from the moisture which remains in the ground after its crust has become dry, and which, under the heat of a southern climate, engenders a noxious atmosphere. Still this cause does not exclude the former; and in the plains of Latium both are probably combined with the want of free ventilation, and the action of stifling and relaxing winds, which increase the moisture of the air and the grounds. To this peculiar humidity of the Roman atmosphere may probably be ascribed the extraordinary difference of temperature between places in the sun and in the shade, which all travellers must have observed at Rome, and which exposes them to the most dangerous alternations of heat and

cold. The singular variations observed in the salubrity of different houses in the same street, and of different stories in the same house, point to the general result, that the source of disease is the immediate vicinity, not of water, but of the ground, or of trees injudiciously planted, so as to obstruct the current of the air. On the other hand, a popular opinion, which Brocchi laughs at as a vulgar prejudice, as to the utility of plantations, appears to be well-grounded, provided they be so situated as to intercept only noxious effluvia. But he seems to be fully justified in the importance he attaches to the use of a woollen dress, and his reasons are confirmed by the experience of the monastic orders which are confined to such a one by their rule, as well as by that of negroes and cattle, whom nature has provided with a similar protection in their skin and hides.

The situation of Rome itself appears to be generally healthy; nor is there any reason for supposing that, independently of historical causes, an unfavourable change has taken place in the air of the surrounding country since the time of the ancients. The only circumstance in which any alteration is observable, is the severity of the ancient winters. The sight of Soracte covered with snow, was undoubtedly an extraordinary occurrence at Rome in the days of Horace: but the ice, which is said at times to have choked up the river there, would now be as great a prodigy as in the Nile. The city, however, was formerly believed to present a striking contrast to its immediate neighbourhood in the quality of the air: and hence Cicero (*De Rep.* 2, c. 6) applauds the sagacity of its founder for selecting a salubrious site in the midst of a pestilential region. The atmosphere of the plain was undoubtedly always, as it is now, thick and impure; and the advantage enjoyed within the walls may be ascribed to the great works by which the kings and the emperors provided at once for the security, the comfort, and the health of the citizens; to the mounds, walls, sewers, aqueducts, and porticoes. But without the walls, before the enormous possessions of rich individuals and the calamities of the later times had converted the Campagna into a desert, with due precautions as to diet and dress it was safely habitable at all seasons, as it would be again, if it were distributed into small portions, cultivated by independent and industrious owners. There is no reason for doubting the truth of the tradition recorded by Pliny, that under the dominion of the Volscians, the Pontine Marshes could boast of thirty-three flourishing towns; or of Strabo's statement, that, with the exception of some marshy spots near the coast, the plain of

Latium was a healthy tract. Such, we learn from Mr. Bunsen, experiments made by a wise and benevolent individual \* have proved it may be made; such, therefore, we may hope it will once more become, when man shall have earned the mastery over nature, by asserting his own freedom.

The second book, containing the historical introduction, opens with a sketch of the growth and decay of ancient Rome, and of the restoration of the modern city, from the pen of Niebuhr, and bearing all the marks of his master-hand, which conducts the reader with magical rapidity, yet without omitting one important step, through the history of the city, from the first settlement on the Palatine down to its occupation by the French. We say no more of this admirable production, which is too condensed to admit of abridgement; and, where all is equally interesting, it is difficult to select. We abstain from the attempt with the less reluctance, as the essay has been published in the author's *Kleine Schriften*. The remainder of this book contains a survey of the principal periods in the topographical history of ancient and modern Rome, which is illustrated by two tables, printed separately, as an accompaniment to the first volume. One table exhibits in six columns the dates of the leading political and topographical events, and of the public buildings of various classes in the ancient city. The second, in four columns, continues the synopsis from the reign of Constantine to that of Leo XII. We shall follow the same thread, but hastily, and only touching on some points which are either new or peculiarly interesting.

After the Tiber had settled within its present bed, the valleys at the foot of the Seven Hills were long covered in their deepest parts with stagnant pools, which were fed by the frequent overflowings of the river, and by the springs in their neighbourhood. Such pools were the great Velabrum, in the low ground between the Palatine and the Aventine, the Lacus Curtius, and the lesser Velabrum, between the Palatine and the Capitoline. The Field of Mars was likewise partially under water, as is testified by the names of the Palus Caprea and the Stagna Terenti, though the position of these pools cannot be precisely determined. These sheets of water, while they contributed to the security

\* Some years ago the waste land about the village of Zagaruolo, in the Campagna not far from Palestrina, was parcelled out by the proprietor, the Duke of Zagaruolo, at a fixed rent among the industrious inhabitants; since it has thus been brought into cultivation, the malaria, for which this district was once notorious, has disappeared. In justice to the Papal government it ought to be mentioned, that Pius VI. had taken measures for accomplishing a similar object on a large scale.

of the heights above them, did not render them unfit for habitation. It was only when they were reduced to the state of swamps that their effect on the air would become dangerous to such a degree as to render the drainage of this region, and its protection from inundations, absolutely necessary. In the midst therefore of these pools, and of the thick wood that clothed the sides of the Roman hills, remains of which were preserved to the eighth century in several consecrated groves, the ancient abodes of Faunus and the Nymphs, was the city of Evander, the cradle of the Roman state, first planted on the summit of the Palatine. It was protected chiefly by the steepness of the cliffs on which it stood, and only needed some artificial strengthening where an easier descent led down to the Velia, a long low ridge stretching away from the south-east foot of the Palatine toward the Suburra, and parting the valley of the Forum from that of the Coliseum. The first enlargement of this narrow compass appears to be indicated by the outline which Tacitus, whose description is evidently grounded on accurate investigation, assigns to the Pomœrium of Romulus (Ann. xii., 24). It must be remembered that this term, though etymologists connected it with *murus*, was one of purely religious import, and did not necessarily, or, for many ages, in fact, denote a limit corresponding to the walls of the city, but only that within which the auguries might be properly taken\*.

The circle described by Tacitus is not perfectly continuous : a break occurs between the eastern boundary of the Forum and the opposite edge of the Velabrum. This perplexing deficiency was first explained by Niebuhr, who observed that the ground omitted must, before the building of the sewers, have been a pool or a morass, which needed no fortification, and could be turned to no use. The festival of Septimontium preserved the memory of a period in which a further addition was made to the space said to have been inclosed by Romulus, when the Latin town, the neighbour and rival of a Sabine one on the Quirinal, comprehended the Cœlius and Esquiline with the Palatine. It did not include the Aventine, probably because this was the centre of union for Rome with the other towns of the Latin confederacy. The two cities met in the valley, where a Janus, closed in peace and open in war, marked at once their union and their independence. The four regions of Servius Tullius, corresponding to the four tribes into which he distributed the plebs, included the Quirinal, but not either the Aventine or the Capitol, which,

\* Niebuhr believes that it originally signified a suburb taken into the city, and included within the range of its auspices.

though on different grounds, were kept distinct; the latter, probably, as a spot of peculiar sanctity. Varro connects this local division with another into seven-and-twenty smaller districts, of which he reckons six in each region, and which contained as many ancient sanctuaries, called the Chapels of the Argeans, a name probably derived from the remotest Pelasgian antiquity, and associated with rites which tradition referred to Numa and to Hercules. Thirty figures so named were solemnly thrown every year into the river, as substitutes prescribed in the room of human victims. And hence Mr. Bunsen conjectures, first, that the three sanctuaries not included in Varro's account of the four regions belonged to the Capitol, where the mythical Argeans were said to have settled, and where the temple of Jupiter contained three cells: and next, that the remaining three, which seem to be wanting to complete the original number, had once existed on the Quirinal, which is denominated the ancient Capitol. He also observes, what appears never to have been noticed before, that the fourteen regions of Augustus were determined by this old parochial subdivision. The Argean chapels were represented by the *ædiculæ*, which corresponded to the number of *vici* that in different ages composed the city; and as we know that there were twenty-seven of these sections in Rome under the kings, so we learn from later documents, that there were about three hundred of them in the capital of the Caesars.

Of the works attributed to the kings,—the Mamertine gaol, the circus, the embankments, walls and mounds of Servius and the two Tarquins, and the *Cloaca Maxima*,—with the exception of the last, no remains have been preserved which can be distinguished upon safe grounds from restorations of later ages. The antiquity even of the last mentioned stupendous monument has been questioned by a writer of great reputation (Hirt, *Alte Baukunst*, I., p. 189), to whom we suppose Mr. Bunsen alludes. Hirt observes, that though Livy and Dionysius, and Pliny (N. H. xxxvi., 24), speak as if the work had been executed in the time of the Tarquins on the same gigantic scale which its remains exhibit at this day, there are insurmountable objections in the way of such a supposition. In the first place, both the great canal and the smaller ones display the arch in perfection, which is said to have been a later invention of the Greeks; and secondly, travertino, which the Romans only began to employ at a subsequent period, has been used in the masonry of the mouth. Mr. Bunsen, on the other hand, thinks it demonstrably certain that the work, in its present form and dimensions, belongs, as the uniform testimony of tradition declares, to the age

of the Tarquins. Only a comparatively small part of it is now accessible to inspection ; but from the uses to which it was destined it may be safely inferred that it must have been carried, in numerous ramifications, under a great part of the ancient city : and its foundations were certainly laid at a depth of more than forty feet. After several other works of a similar kind had been executed under the republic, this continued always to be distinguished by the epithet of *the greatest*, or else was emphatically called *the Cloaca*. The accounts transmitted to us of such undertakings in the republican period speak only of the cleansing and repairing of the old sewers (*ἀγάθαποις, ἐπισκευή*, Dionys. iii. 67—*detergendas, qua opus esset, cloacas*, Livy, xxxix., 44) ; and the sum mentioned by Dionysius in the passage just cited, as a remarkable proof of the magnitude of the work which it cost so much to repair (1000 talents), would be absurdly small, if considered as the sum applied to the building of the great sewer. Mr. Bunsen also remarks that such a work would have been scarcely possible, after the restoration of the city that followed its capture by the Gauls, when the new streets were irregularly built across the subterraneous conduits, which had been originally planned to follow the course of the old streets. The result to which this evidence leads is moreover confirmed by the nature of the material, which, as Mr. Bunsen states, is not either peperino or travertino, but the Roman tufa, which afterwards fell into disuse. And he therefore conceives that the difficulty of supposing so early a knowledge and application of the arch in Italy ought not to be allowed to disturb a conclusion which rests on such solid grounds, especially as very early specimens of vaulting occur in Etruscan fortifications, though it appears to have been practically unknown to the Greeks for a century and a half after the time of the elder Tarquin ; while the fact, if admitted, renders the Roman monument additionally interesting for the history of the arts.

We pass over the history of the city during the republic, only remarking, that the meanness and deformity of the streets and private buildings occasioned by the Gallic invasion, heightened by contrast with the increasing magnificence of the public edifices, continued till the reign of Nero, even after the alterations and additions by which Augustus gave the city a marble front. He appears to have done little more than carry into execution the plans of the great Cæsar, who, if he had lived long enough, would probably have accomplished still more important changes : for he had meditated turning the course of the river, so as to take the Vatican plain

into the Field of Mars. Nero's fire, which broke out on the anniversary of the Gallic conflagration, destroyed much that the frantic despot was unable to restore: not only splendid works of republican and imperial architecture, and venerable monuments of Roman antiquity, but invaluable productions of Grecian art. The city gained, indeed, by the symmetry prescribed by the emperor in the new plans, and by the police regulations which he established: yet it was doubted even at the time, whether the old narrow streets, with their high houses, were not more conducive to the health of the inhabitants, than the broad spaces which were laid open to the sun in the new quarters. The compass of the city was enormously increased by this event, and Pliny has recorded a survey taken in the year 828, by which it appeared, that its buildings (which, according to an important remark of Niebuhr, must be the meaning of the word *mænia* in this passage of Pliny, H. N. iii. 5, as it is in several others) filled a circuit of more than thirteen miles. Succeeding emperors, down to the reign of Constantine, contributed to the magnificence of the capital, chiefly by buildings dedicated to the pleasures of the populace, whom the policy of a despotic government provided with luxuries, which otherwise would only have been within the reach of the largest fortunes.

A survey of the principal epochs in the topographical history of Christian Rome is introduced by a dissertation on the origin and authority of the collection of lives of the Popes, commonly ascribed to Anastasius; a book, which is the main source of our information on the early works of Roman ecclesiastical architecture, and the changes produced by them in the aspect of the city; and by an interesting account of the ecclesiastical and civil divisions of modern Rome. It has been a favourite opinion of some antiquaries, that the seven ecclesiastical regions into which the city is said to have been first divided by S. Clemens in the first century, corresponded to the fourteen of Augustus, so that each of the former contained two of the latter. This supposition, however, is not confirmed by an accurate examination of their several limits, nor is it at all necessary to explain the fact. The number seven was probably suggested by the example of the primitive church at Jerusalem, and adopted at a time when Christian congregations were not to be found in all the fourteen regions. But from it was derived the number of the seven Palatine judges, who represented the emperor in the election of the popes, as well as that of the cardinal bishops, and, as Niebuhr conjectures, that of the German electors. Nor have the fourteen Augustan regions any historical con-

nexion with the modern *rioni*. Twelve was the prevailing number in the civil constitution of the Christian city : the quarter of Trastevere was long distinguished from the twelve regions of Rome as a distinct town, which appears for the first time in the latter half of the fourteenth century as a thirteenth rione : though a change, the origin of which has not yet been discovered, had taken place before in the division that existed in the twelfth century, when the first region took its name from the Coliseum, whereas the present series begins with the Rione di Monti. The last of the modern sections, the Rione del Borgo, was added to the rest by Sixtus V. It had previously been kept apart by the jealousy of the Popes, as their peculiar domain, the inhabitants of which had no claim to the franchise of Roman citizens. But when the latter had lost all value, the municipal government having become absolutely dependent on the Papal court, Sixtus annexed the Leonine city, as the fourteenth rione, to Rome. It is remarkable that the old distinction between *montani* and *pagani*, which took its origin in the ancient septimontium, appears to be kept alive to this day by the inhabitants of the first rione (di Monti)\*, who form a community marked by a peculiar dialect and manners, and are designated by the name of *montigiani*, while they themselves, like the people of Trastevere, nickname the other Romans *piani*.

Among the various causes that have contributed to the ruin of Rome, since it ceased to be the seat of empire, the devastations of the northern barbarians, though they have been, more frequently perhaps than any other, a subject of rhetorical lamentations, were the least considerable in their effects. The Goths and Vandals were insatiably greedy of the treasures amassed by the mistress of the world ; but they were never tempted to search for them, like the Turks, under ruins ; and when they had stripped the temples and palaces of the precious metals that adorned them, they inflicted no further injury on the walls or columns. After Alaric and Genseric had spoiled the city, the secretary of Theodoric could still dwell with rapturous admiration on the marvellous beauty and splendour of its buildings, and even on the multitude of its statues. The Gothic kings who succeeded Theodoric protected, and even repaired its monuments ; and even Justinian's invasion, though more disastrous than the victories of the barbarians, caused no material mischief beyond the razing of a part of the walls, with which Totila, in the heat of a just resentment, magnanimously contented him-

\* It includes the Quirinal, Viminal and Esquiline, with the intermediate valleys.

self. The zeal of the Christians, which from time to time defaced the pagan temples, and deprived them of their ornaments, in order to adapt them to the purposes of the new religion, was a more permanent cause of destruction ; but, on the other hand, was limited in the objects and mode of its operation. It was not only directed chiefly against a certain class of buildings, and in them to a change which might often be considered as conservative rather than destructive, but was also long subject to external restraint. After the worship to which the temples were consecrated had ceased to be tolerated, they were still protected as state property by the imperial laws ; and even the images which had been the objects of idolatrous reverence, when degraded from their sacred rank, were still permitted to adorn other public edifices or places. So long as the sovereignty of the Greek emperors or the exarchs was acknowledged, the popes themselves could not dispose of the public monuments, even for pious uses, without the permission of their temporal superiors. Accordingly, Boniface IV. was obliged to obtain leave from Phocas before he converted the Pantheon into a Christian church ; and the same evidence, which proves that St. Peter's was ornamented with the spoils of paganism, also informs us that, in each instance, the transfer was made by imperial license. These facts enable us to appreciate the credibility of the legends by which writers of later ages thought to enhance the glory of Gregory the Great, when they related, that, in a transport of holy zeal, he had demolished all the ancient monuments, which might have disturbed the devotion of the pilgrims who came to adore the relics of the apostles ; and that he set an example to Omar, by burning the library of the imperial palace on the Palatine. It is true that a time came when the power of the popes was entirely freed from foreign control ; but then the religious animosity, which at an earlier period might have instigated them to acts of wanton devastation, had cooled from the want of fuel : thus heathen monumients were viewed with indifference, and were applied to ecclesiastical purposes only from economical motives.

Had no other causes than these been at work, the sight of the fallen city would scarcely have awakened the complaints of Petrarch or of Poggio. But the most destructive ravages, those which effected the most sweeping changes in the face of Rome, arose from the feuds of the Roman barons and the contests between them and the popes, and between the popes and the emperors. In the tenth, eleventh, and twelfth centuries, it was usual for the popes to grant the ancient monumuments which were capable of being converted into strongholds,

to the nobles who espoused their cause, and the latter did not fail to make a proper use of these valuable possessions. The mausoleum of Hadrian had been long before transformed into a fortress by Belisarius, and, during this period, all the most important public buildings appear to have been applied to the like purpose. It may be supposed, that, in fortifying these holds, little attention was paid to their external appearance, and that as little respect was shown to them by the enemies of their possessors. The razing of a house or castle of a political adversary was an ordinary occurrence in the feuds of the middle ages, and at Rome such a measure was never retarded by the thought, that the condemned building had been a temple or a theatre, a mausoleum or a triumphal arch. The most memorable of all the achievements of this kind on record was that of the senator Brancaleone, who, in the year 1257, to weaken the noble families, destroyed at once one hundred and forty ancient monuments which had served them as fortresses\*. It is only surprising that so many should have been left standing after the calamitous siege laid to the city by the emperor Henry IV., and the still more ruinous conflagration that attended the entrance of Robert Guiscard and the half Norman, half Saracen army, which he brought to the assistance of the pope. Yet even after these desolating inroads, a pilgrim, who visited the city at the beginning of the next century, could exclaim : *Non tamen annorum series, non flamma nec ensis Ad plenum potuit hoc abolere decus : Tantum restat adhuc, tantum ruit, ut neque pars stans Eequari possit, diruta nec refici.*

The residence of the Papal court at Avignon, though it exposed the Romans to all the miseries of oppression and anarchy, and withdrew the means of keeping even the Christian churches in repair, operated rather indirectly than immediately to the detriment of the ancient monuments. It may be considered as having contributed to their ruin, in the same degree in which it conspired to increase or perpetuate the extraordinary barbarism, which signalized the Romans in the middle ages above the inhabitants of perhaps all the other Italian cities. A thicker darkness of ignorance, accompanied, as might be expected, by a proportional ferocity of manners, hung over the capital of Christendom, than over any other part of Italy, or perhaps of Christian Europe.

\* Gibbon (c. 69 and 71) describes the buildings destroyed by Brancaleone as mere towers, and seems to suppose that they were only constructed from ancient materials. A passage quoted by Mr. Platner from an early writer, Albertinus Mussatus, who says that almost all the baths and temples that had been preserved to the time of Brancaleone were demolished on this occasion, places the event in a different point of view.

The light of letters, feeling for the arts, reverence for departed greatness, penetrated more slowly here than elsewhere ; and hence, after men had arisen touched by the spirit of the ancients, and capable of estimating the value of their relics, the Romans were so utterly indifferent about their remaining treasures, that in the fourteenth and fifteenth centuries they frequently sold the most precious ornaments of their public buildings to be transported to foreign cities, where a taste had been awakened for such acquisitions. During the same period, the surviving monuments of antiquity were continually subjected to the most ignoble species of mutilation and gradual destruction, by being converted, *calcis in obsequium*, into materials for the limekilns : a sordid violence, which justly excited the indignation of intelligent spectators, more than all the ravages of intestine feuds or hostile invasions. The Coliseum, in particular, is well known to have suffered more from this than from any other cause, and it is perhaps to this period that we ought to refer the loss of the metal links which connected the stones of that vast building, the removal of which has been, it should seem, very unjustly imputed to the avarice of the earlier barbarians, who had before them objects of greater value, and more easily appropriated, in an abundance which all their rapacity was unable to exhaust.

The end of the thirty years schism, by which Rome became the fixed seat of an undivided spiritual monarchy, and was enriched by the overflowing of the streams that were continually poured from all parts of Europe into the papal treasury, was the beginning of a new period of prosperity and splendour to the city. Since this epoch the attention of the Popes has, with little interruption, been actively directed to the reparation and embellishment of their capital. But the manner in which this praiseworthy spirit has manifested itself has varied with the character of the men and the bent of their age. In the period immediately preceding and following the rise of the Reformation, the taste for ancient literature and art was predominant at Rome, as elsewhere, and an enthusiastic and almost superstitious admiration succeeded the oblivion and neglect of so many centuries. But the ruins of the ancient city, though they were now viewed with more general interest, were a mine, which it required learning, judgment, time, labour, and cost to explore with advantage, and the opening of new streets and the erection of new palaces were deemed more pressing objects, and generally demanded some sacrifice on the part of antiquity. The fairest prospect that has appeared in modern times of an extensive and ju-

dicious restoration of the ancient monuments seems to have been overclouded by the death of Raphael. A letter addressed to Leo X., which has been ascribed to Castiglione and published among his works, but in which he appears, from internal evidence, only to have expressed the thoughts of Raphael, contains a project of such an undertaking drawn up by the desire of the Pope. This important document, which is annexed to the Historical Introduction, is interesting not only on account of the views of ancient and modern architecture unfolded in it, but also as evidence of the state of Rome in the time of the writer. After having regretted that so many monuments of ancient art, which had escaped the fury of the barbarians, had been destroyed by the predecessors of Leo, or carelessly abandoned by them to the stupid rapacity of men, who undermined their foundations for the sake of the earth at the bottom, and broke up their marble ornaments for mortar, he proceeds to deplore the havock of which he had himself been a witness. ‘I cannot remember,’ he says, ‘without great sorrow, that since I have been at Rome, not quite eleven years\*, so many noble monuments as the pyramid that stood in the via Alessandrina, that unfortunate arch, and so many columns and temples have been destroyed, especially by Bartolomeo della Rovere.’ And he entreats the Pope to interpose his authority for the protection of the few remains that were still left to attest the ancient greatness of Rome. These private inroads appear at length to have been repressed, either by the coercion of the government, or the diffusion of a better feeling. But Raphael’s plan was not accomplished, and after the Medicean period the ears of the Popes were no longer open to such proposals. A re-action, which may be pretty clearly traced to the alarm caused by the Reformation, took place in the course of the same century against the pagan taste which had so unnaturally prevailed for a time in the Vatican. New churches and palaces continued to rise, though in a rapidly degenerating style; but the preservation of the ancient monuments was less than ever a matter of paramount concern. Sixtus V., whose active reign produced many of the most important changes in the aspect of the city, was not, indeed, negligent of that object: he erected several prostrate obelisks, laid open the base of Trajan’s pillar, and repaired that of Antoninus; but, with a zeal worthy of older times, he also made war on some heathen statues that still adorned the tower of the Capitol, and de-

\* This is one of the internal marks which prove that Castiglione can only have lent the assistance of his pen to the author of the letter: he himself never made so long a stay at Rome.

liberately sacrificed to his plans some interesting remains both of pagan and Christian antiquity. The same want of classical sympathies unfortunately showed itself in several of his successors, who were most distinguished by their love of building. And though, in the latter half of the last century, the papal government was animated by a different spirit; and by the most liberal patronage, and the most magnificent undertakings, especially by the foundation of the Museo Pio-Clementino, laboured to draw all votaries of the arts to Rome as their common European shrine, still the principle of preserving the remains of antiquity, as a precious and sacred inheritance, with reverential care, can scarcely be said to have been ever distinctly recognized till within the present century. The measures of Pius VII., and his successors, afford some ground for hope, that this simple maxim, the neglect of which has occasioned so many irreparable losses both to history and the arts, will not again be wantonly violated. But it is melancholy to reflect, that this late wisdom appears to have been the fruit of bitter experience, which has suggested the thought that even the treasures of Rome are not absolutely inexhaustible, and that it is prudent to husband them before it be yet discovered that they may be counted. The treaty of Tolentino seems first to have given a lesson of economy, that has not been lost upon the Romans. Unfortunately, their museums, palaces, and churches were stripped of their most precious ornaments, not merely to grace the triumph of the conqueror, and to attract the gaze of Europe toward a different scene, but often to satiate the rapacity of individuals; and the spoil, if it was not irreparably damaged in the transfer, was at least irrecoverably buried in private cabinets. Of three thousand pictures or statues which were proved to have been transported out of the territory of the church, besides those ceded by the treaty of Tolentino, only twenty-two returned to Rome. The magnificent collection of coins and gems was entirely exempted from the claim of restitution by the treaty of Paris, as private property of the restored French King, and many fell into private hands. In many instances, the pleasure of recovering a celebrated picture or manuscript was embittered by regret for the change it had undergone during its absence. The imperial government, however, in some measure compensated this loss and mischief, by the instructive and animating example it held up to that which succeeded it, in its extensive repairs and judicious excavations.

As it was not our design in this review to give a complete analysis of the work before us, but only to enable our readers

to understand its plan, and to form some conception of the nature of its contents, we here terminate this notice. We stated at the outset, the principle on which we have made our selection among the various subjects presented to us; and when we consider the important place that Roman history justly holds in every system of liberal education, we do not fear lest the details into which we have entered should be thought foreign to the plan of our Journal. We must, however, add, that to a very large class of readers the third book of the Introduction,—which contains a series of essays on the sculptures of the Roman museums, on the history and ornaments of the Catacombs, on the form of the Christian Basilicæ, and, finally, an elaborate review of the progress of the arts in Rome from their revival to the present day,—will probably be still more attractive than those on which we have dwelt. We will at least venture to promise all those who may take an interest in such disquisitions, that in the treatment of these delicate subjects, they will find nothing trivial or crude, nothing fanciful or exaggerated; but that they will enjoy the mature fruits of a highly cultivated taste, and the well-weighed results of long and accurate study. Nor ought we to pass over in silence, though we were unable to transfer any tinge of it to our own brief sketch, the truth and liveliness of Mr. Bunsen's local descriptions,—a charm arising from the author's long familiarity with the scenes described, and which cannot be fully enjoyed by readers who are strangers to them; but which we think will often recall the most striking features of Rome and the Campagna to those who have beheld them, with a freshness which could scarcely be reached by the pencil.

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#### ELEMENTS OF PHYSICS.

*Elements of Physics, or Natural Philosophy, general and medical, explained independently of Technical Mathematics, and containing new Disquisitions and practical Suggestions.* By Neil Arnott, M. D. Two volumes. Fourth Edition. London, 1829.

THERE is nothing in which the acquirements of the present time differ so much from those of former periods, as in the extent and variety of subjects which an educated man is generally expected to know. Even the lighter literature of

the day abounds in allusions and illustrations, drawn from matters, with which, a hundred years ago, none but the scholar or man of science had any acquaintance ; and the natural history and physical peculiarities of the countries through which they pass, form a principal object in the inquiries and amusements of a large proportion of those who travel merely in search of pleasure. The circle also of these researches is continually widening, and the discoveries of philosophers, instead of being locked up and remaining unknown for years, except to a few retired and laborious students, have their results reduced into a popular form, and become part of the common currency of the educated world.

The necessary consequence is, that with a very wide diffusion of *some* knowledge, there is a great deal of vague and inaccurate information. A smattering of information on a large variety of subjects is thought to be almost indispensable ; and a smattering only is too frequently all that is attained : and it is probable that the complaints so frequently made of the decay of real eminence in science or learning may not be entirely without foundation, although exceedingly exaggerated, and that the attention, which has so many subjects presented to it, may seldom be sufficiently concentrated upon one.

If, however, it has become impossible for any, except those who have a large measure of time and talents at their disposal, to gain more than a very slight and superficial knowledge of much which they are expected not to be ignorant of, it is of great importance that every available means should be urged to guard against the loose and inaccurate habits of mind which such knowledge is apt to produce. And for this purpose it seems very desirable that the distinction should be fully and frequently impressed, which exists between the knowledge of a thing, and a knowledge about it ; and that, whenever knowledge must be confined to the latter and inferior kind, the learner should at least be made to understand its deficiency, and learn how far he may trust it. For this purpose it will be very desirable that something at least should always be well and completely taught, not on the principle of M. Jacotot, that the learner may refer every thing to it, and find all future knowledge involved and contained in it, but that he may at least have a high standard to which to refer his acquirements, and may know practically, from the contrast between the familiarity and certainty of his reasonings and conclusions on one subject, and their doubtful and unsatisfactory character on others, the different degree in which he understands two different things. Besides this,

it will be very necessary that every work which gives only imperfect and uncertain knowledge should be carefully deprived of the pretension to give any thing more ; that the statement of results should be carefully distinguished from the investigation of processes, and that the loose arguments drawn from analogy and probability should not pretend to the character of strict demonstration.

If these remarks be correct, they will obviously apply with peculiar force to a work which professes to give an introduction to the whole system of physics, without resorting to technical mathematics ; and it is, therefore, of some importance to examine whether Dr. Arnott's work, which has deservedly met with a very extended circulation, is properly guarded on this material question ; and if it be not, to point out the qualifications with which it ought to be received. If the author has not sufficiently attended to the distinction which we have suggested, the error does not so much arise from any indifference to its importance, as from an undue appreciation of the powers of the method which he has adopted : for Dr. Arnott's theory, which appears even in his title-page, is—

'That what may be called *the mathematics of common sense or experience*, and which may be expressed in ordinary language—as distinguished from *technical mathematics*, which has its peculiar language—is perfectly sufficient for the explanation of all the great laws of nature.'—*Preface*, p. vi.

And again :—

'There are few persons in civilized society so ignorant as not to know that a square has four equal sides, and four equal corners or angles ; that every point in the circumference of a circle is at the same distance from the centre, &c. Now so much of unity, simplicity, and harmony is there in the universe, that such obvious truths as these are what give exact cognizance of the most important circumstances in the phenomena and states of nature. And indeed the science of quantity, in its highest flights, being merely comparison of the various simple standards (which have been previously stated to be numbers, and the ordinary measures of length, surface, and bulk, and the common plane and solid figures) among themselves, or with other forms and quantities ; and the standards being now familiar to all men living in civilized society, because types or examples of them are continually under view, almost every person arrived at years of discretion knows them well, and therefore is really acquainted with the great fundamental truths of mathematics.'—*Introduction*, p. xxix.

And accordingly, in a scheme of the natural and most expedient order of study, we find physics placed at the commence-

ment; and then the learner, beginning in childhood, is conducted through chemistry to the philosophy of life, thence to that of mind, including language; and, finally, as 'a fifth and subsidiary department of human science,' to 'the science of quantity or the mathematics.' It is obvious that, according to this scheme, this latter department would not be reached at all, except by a very small proportion of students; and consequently, if Dr. Arnott's proposed system is to be considered as giving real knowledge of its subjects, it must be on his own principle of the absolute sufficiency of 'the mathematics of common sense.'

We certainly entertain a different opinion, and think that the only knowledge of many of the subjects comprised in the work before us, which can be obtained without technical mathematics, is that which we have qualified as knowledge *about* them; and it is principally with reference to this question that we purpose to examine Dr. Arnott's work. We do not therefore propose to enter into any critical examination of the general merits of its execution, or even to discuss whether his projected scheme of education be a wise one, but merely to try, by the test of his performance, the sort and degree of knowledge which his principles, by themselves, are fitted to supply. For this purpose it will not be necessary to refer to more than a small portion of the work; and as the doctrines of mechanics stand first in order, and are more simple than those of hydrostatics, pneumatics, &c., we shall merely confine our attention to the exposition given of the former. If that be incomplete, the others must be so also.

It is, however, right to observe, in the first instance, that whatever the result of this investigation may be, it will leave the value of a large portion of the work before us entirely unaffected. It is generally written in a lively and agreeable style, though there are passages both of eloquence and of pleasantry, some of which might perhaps be expunged, and many certainly altered with advantage. The explanations also of many delicate and curious principles and contrivances are singularly lucid and intelligible. Above all, it possesses the merit of illustrating the principles which it lays down by a remarkable variety of experiments and observations, some striking from their circumstances and importance, but the most part, and to these we attach the greatest value, distinguished by their familiarity and continual occurrence. We know no work so likely to produce a habit of referring the everyday occurrences of life to the general laws of which they are instances, nor any habit

more useful, both for the familiar knowledge of the observations of nature which it produces, and for its general effect, as an exercise of the mind. It is of course impossible to exhibit this latter excellence of Dr. Arnott's work by extracts; for it does not consist so much in the ingenuity of any particular example, as in the general character of the illustrations; but we have great pleasure in bearing testimony to its existence, and in pointing out its great value in a book designed, as far Dr. Arnott's is so, for the purposes of education, and especially of that highest and most important part of education which respects not merely the communication of particular knowledge, but the formation of those habits of reasoning and thinking which are to regulate the general character of the mind in after life.

Thinking thus favourably of the execution of a large part of Dr. Arnott's work, we have no difficulty in taking it as a fair and favourable specimen of the sort and degree of instruction which can be expected on scientific subjects from treating them in the manner which he recommends and adopts. It may undoubtedly happen that, in many instances, in which we may point out an error, or looseness of demonstration, a stricter and more satisfactory proof might be devised without entering upon technical mathematics. Whenever this is the case, it may be said, that the defect is in the execution, and not in the system, and therefore furnishes no argument against the latter. We think, however, that the observation would be incorrect. Other writers, upon the same plan, might avoid particular errors into which Dr. Arnott has fallen; but it is not likely that a work of the kind will soon be written with greater care, or with greater ability; and the important practical question is, not what results the system possibly can, but what it is likely to produce.

We proceed, therefore, to examine the portion of the work which we have selected, and to inquire whether a student, taking it as his manual, and being told that it gives him accurate and sufficient knowledge, will not often be led into error. There are several ways in which this may be done. It will happen *directly*, if any of the results stated are erroneous in themselves; it will happen *incidentally* also, if any thing represented as proof amounts only to illustration; if it is inapplicable to the subject, or if the order of investigation is reversed, and the conclusion, to which we are led by the observation of certain facts, is stated as the reason of their existence. The latter causes of error are, for our purpose, most entitled to attention, because much of this evil arises from the assumption of a character of demonstration to which

they are not entitled. If treated as proofs, they will perplex the mind, if it sees their want of cogency; or they will corrupt it, if it acquiesces in them as absolutely sufficient. A similar result will follow if any thing be given as an instance of a particular principle, which really requires a different explanation; and the mischief is the greater in this latter case, because the greatest value of the work seems to consist in the habit which it inspires of referring all common appearances to their real causes or classes; and it is therefore the more important that it should not mislead as to the manner of doing so.

We shall not trouble our readers with the formality of classing the objectionable passages under their different heads of error, but shall merely select them in the order in which they occur, confining our attention in general to those passages which either most clearly exemplify the evils which we have enumerated, or, from their subjects and importance, render any mistake of peculiar consequence. A more minute discussion would hardly repay the labour of reading it, although, in the plan adopted, some material, as well as many less considerable errors will pass unnoticed.

The first passage to which we would call attention occurs in the Introduction, p. xvi. Among the facts which led to the discovery of gravitation, we are told, that 'it was found that bodies floating on water near to each other approached and feebly cohered.' And again, in p. 12. of the work itself, 'the general nature and extensive influence of attraction may be judged of from the following facts: logs of wood floating in a pond approach each other, and afterwards remain in contact. The wreck of a ship, in a smooth sea after a storm, is often seen gathered into heaps, &c.' The latter instance principally results from the manner in which the fragments, when driven together by wind or current, impede each other's motion, and get entangled together.

The true explanation of the former is this, that the water is raised all round the floating bodies by capillary attraction; that when they come within a certain distance of each other, there is not water enough between them to rise to so great a height there as on the opposite sides of the bodies, and that the greater weight of water on the outside therefore presses them together: an instance certainly of gravitation, but of the general gravitation of all bodies towards the earth, not of the two floating bodies towards each other. It happens singularly enough, that this was an experiment which Professor Vince used to introduce in his lectures at Cambridge, for the express purpose of warning against hasty conclusions; and when the

Floating balls ran together, he would say, with Dr. Arnott, ‘Now this looks very like attraction;’ but he went on to furnish the true solution.

There is serious objection to the passage in the Introduction in which the above instance occurs. It professes to give an account of the history of the discovery of gravitation, and deduces it from five classes of observation: first, the tendency of most things to fall towards the earth; second, the existence of an atmosphere explaining the rising of some bodies; third, the mutual action of bodies on each other, of which we have the instance already commented upon, and also that of the manner in which a mountain draws a plummet out of the perpendicular; and the inference is deduced that all particles of matter act on each other, and the roundness of the earth is referred to this cause; fourth, the roundness of the heavenly bodies, from which it is concluded that the same law obtains there; and lastly, the influence of the sun and moon on the tides, from which it follows that these bodies, however distant, attract each other. ‘Thus this sublime truth was at last made evident by the genius of the immortal Newton.’ The same instances and arguments are repeated in pages 12 and 13 of the work, with the addition, in the case of the heavenly bodies, that their roundness ‘proves that all must, at one time, have been to a certain degree fluid, and that all are subject to the same law’: an argument again repeated, for a different purpose, in the second volume, p. 130.

The argument drawn from the form of the earth and heavenly bodies is very much overstated, since it can amount by itself to no more than this, that their shape *corresponds* to the existence of the law, and the supposition of the fluidity: it might, on the other hand, be that of their original creation, without resorting to either hypothesis for its explanation. With this exception, however, and that already made above, the arguments may fairly be used, as they are in the treatise, to prove the existence of attraction: for all experiments, though originally devised from the previous supposition of a principle, may fairly be used for its confirmation and establishment. But the case is different with the passage in the Introduction, which professes to give the history of the discovery: for, if taken as history, it is untrue, and almost impossible. The most delicate experiments there described not only were, but almost necessarily must have been, devised in consequence of the knowledge that gravitation existed: and particularly that of the plumb line was resorted to, not to try the existence of the principle, which was assumed, but to estimate the density of the earth by the proportion between

its force and that of the mountain. While circumstances, however, are introduced which did not tend to the discovery, that which did, the correspondence between the amount of attraction at the moon and at the surface of the earth, is omitted; and the omission is the more to be regretted, because, not so much even from the importance of the discovery, as from the singular good faith and scrupulousness of the discoverer in the evidence which he required of its truth, it furnishes the most interesting chapter in the history of science. The full explanation perhaps could hardly be given so early in Dr. Arnott's work; but then the narration should have been deferred.

The next passage on which we feel it necessary to comment is liable to a similar objection; for here also the order of proof and discovery seems to be inverted. After explaining the philosophical action of an atom in the beginning of this treatise, and the few simple kinds of matter at present discovered, Dr. Arnott proceeds, ‘It is a remarkable truth, that when different substances combine in the way now described, the proportions of the ingredients are always uniform, and such as to lead to the conclusion, that for every atom present of one substance, there is exactly one, or two, or three, &c. of the other. Therefore, if there be ten atoms of one substance, there are exactly ten or twenty, &c. of the other; but never an intermediate number, as 13 or 23 to 10, *for then a particle of the compound would consist of one atom of the first, and of one and three-tenths, or two and three-tenths, &c. of the second substance, which is absurd, as the atom is indivisible.*’ Now we believe that this is a mere inversion of the order both of history and reasoning; that the discovery of the law of definite proportions led to the atomic theory, not the theory to the law, and that it *must* have done so. There is no reason *a priori* for the existence of atoms, there is no proof of any kind that bodies are actually so composed; but when it is found that the proportions in which different kinds of matter will combine with each other are always the same, this result corresponds with that which would follow from the supposition that every kind of matter is composed of ultimate particles, and that each particle of one kind of matter unites in a regular way with a certain number of the ultimate particles of another; and this supposition, or mode of expressing the general fact, is adopted as a theory for its explanation. When such a thing is devised from a sufficient observation of facts, it is allowable to use it for the establishment of other particular results, but not to treat the theory as proof of the facts from which it is deduced, and to say that a contrary

result would be absurd, as the theory is true. For instance, we may fairly reason that, as gravity varies inversely as the square of the distance, the perturbations occasioned in the orbits of different planets by their action upon each other must be of such magnitude and nature ; but we cannot, unless we have established the law independently of the facts in question, fairly say, the heavenly bodies move in ellipses, and it would be absurd and impossible for them to do otherwise, for gravity varies inversely as the square of the distance.

The next passage to which we would direct attention is much too long to extract, extending from page 61 to 68, and containing a singular mixture of the faults and merits which we attribute to the work : merits, in the number and variety of the instances adduced, and the clearness of their expression ; faults, some of which we must exhibit more in detail. ‘ A body moving in a circle or curve is constrained to do what is contrary to its inertia. A person, on first approaching this subject, might suppose that a body, which for a time has been constrained to move in a circle, should naturally continue to do so when set at liberty ; but on reflecting that a circle is as if made up of an infinite number of little straight lines, and that the body moving in it has its motion bent at every step of the [progress, the reason is seen why constant force becomes necessary to keep it there, and force just equal to the inertia with which the body tends, at every point of the circle, *to pursue the straight line*, called a tangent, of which that point is the commencement. The force required to keep the body in the bent course is called centripetal, or centre-seeking force ; while the inertia of the body tending outwards, *that is, to move in a straight line*, is called the centrifugal, or centre-flying force.’ p. 61. With some slight exception perhaps to the manner in which it is assumed, that a curve may be treated as if made up of small straight lines, nothing can be clearer than the explanation of the necessity of a constant action of force ; but the definition of centrifugal force, and the deduction of the amount of centrifugal force required, are both of them erroneous. The centrifugal force, properly so called, is not the inertia of the body tending outwards, that is, to move in a straight line ; but it is only the tendency of that inertia to increase the distance of the moving body from the centre : it, therefore, is measured, not by the space which the body would move through in a very short given time in the direction of the tangent, but by the distance at which, at the end of that time, it would be from the circle. The centrifugal force, therefore, is a force, not equal to the inertia of the body in the direction of its motion, but to its

effect estimated in the manner already pointed out : a meaning which the words, ‘the inertia with which the body tends to pursue the tangent,’ may perhaps admit, if we interpret ‘tends to pursue,’ by ‘resists any deviation from’ the tangent ; but this certainly is not their most obvious and natural sense.

These errors may perhaps seem of no very great importance, and rather to affect the verbal accuracy, than the real correctness of the passage. But any error connected with the use of terms so frequently employed as centripetal and centrifugal force is material, and the mischief thus produced is fully exemplified in the remainder of the pages at present under examination. They consist principally of a number of instances of the operation of these forces : some in which the terms are correctly used, some in which they are not : and the evil of the erroneous definition is perhaps greatest in the former cases, for in them it must lead to a feeling of perplexity and doubt, exactly opposed to those habits of thinking and reasoning, which are among the most useful results of physical researches. Thus the very first instance given is, ‘A sling-cord is always tight while the stone is whirling, and its tension is of course the measure, both of the centripetal and centrifugal force :’ a position perfectly true, but which ought by itself to have corrected the definition given, for assuredly no one who ever slung a stone could fancy that the tension of the string acted in the direction of the tangent, or in any direction except along the line of the string, and directly away from his hand. What then will be the condition of the learner who finds his definition and his very first example irreconcileable ? What will be his notions of the certainty and accuracy of science ?

Again in page 67, we are told that ‘the earth has bulged out seventeen miles at the equator, in consequence of its daily rotation, and is flattened at the poles in a corresponding degree. A mass of lead that weighs one thousand pounds at our pole, weighs about five pounds less at the equator, by reason of the centrifugal force.’ The centrifugal force, therefore, is stated at the two-hundredth part of the centripetal. If the centrifugal force be the inertia of the body tending to move straight onward, it must increase in the same ratio as the velocity ; and a learner, with any disposition to draw conclusions for himself, would probably make the observation, that the velocity of the earth’s rotation would require to be increased two hundred fold, before the centrifugal became equal to the centripetal force, and he would draw a correct conclusion from the information given him. But what will

he find in the same page? ‘If the rotation of our earth were seventeen times faster than it is, the bodies or matter at the equator would have centrifugal force equal to their gravity.’ The confusion would seem irremediable, and the last cause to which the student would refer it, would probably be the incorrectness of his definition. Suppose, however, the definition to be amended: he will still, without the assistance of some portion of what Dr. Arnott calls technical mathematics, be unable to see the correct correspondence of the different results, for it is only by their assistance that he can ascertain that the centrifugal force in the same circle varies as the *square* of the velocity. It may indeed be stated as a fact, that the centrifugal force does vary in this ratio, and the conclusion in question (with some modification depending on the shape of the earth) will follow; but then an important deduction of reasoning is made matter of assertion or definition, and the philosophy which requires this assistance, can hardly be said to be ‘sufficient for the explanation of all the great laws of nature.’

The continuation of the passage last quoted affords more matter for observation. ‘If the rotation of our earth were seventeen times faster than it is, the bodies or matter at the equator would have centrifugal force equal to their gravity, and a little more velocity would cause them to fly off altogether, or to rise and form a ring round the earth like that which surrounds Saturn. Saturn’s double ring seems to have been formed in this way, and is now supported chiefly by the centrifugal force of the parts. Were it to crumble to pieces, the pieces might still revolve, as so many little satellites. His true satellites are only more distant masses sustained in the same manner.’ The first objection which here occurs, is the vagueness of the expression ‘fly off altogether,’ by which it would probably be understood that the bodies would quit the surface of the earth and never return to it; while the fact is, that they would at the time absolutely quit the surface of the earth, and revolve in an elliptical orbit, passing in each revolution through the spot where they had first quitted it, which would be the nearer extremity or perigee of the major axis of the orbit. But would they rise and form a ring like Saturn’s? or what reason is there for supposing that Saturn’s ring was so formed? and to what extent is it true that, were it to crumble to pieces, the pieces might still revolve, as so many little satellites? We have already mentioned, that each particle of matter thus detaching itself from the surface of the earth would revolve in an elliptical orbit, the centre of the earth being in the focus. Every particle in the ring of Saturn moves in a circle round the centre of that planet. It may

not be impossible that the particles thus detached might continue within the influence of each other's attraction ; that they might unite, or, if all detached at once from the planet, that they would never have separated from each other ; and if the tendency of each to move in the elliptical orbit, which by itself it would have described, be less than its disposition to adhere to the particles in contact with it, they might modify and alter each other's motion, and produce the result suggested. But is this the history of the formation of Saturn's ring ? The motion of rotation of any heavenly body appears to be unsusceptible of any change : if therefore Saturn's ring had been so formed, the rate of motion of the remaining part of his body would still show at least the possibility of such a result having taken place. If the rate of Saturn's rotation had thrown off all the matter of which the planet was originally composed, and which extended beyond a certain distance from his axis, the remaining part would be all that which was within the necessary distance ; and the equator of Saturn would now revolve with the velocity which just rendered the centripetal and centrifugal forces equal, or with the velocity of a satellite moving in a circular orbit close to the surface of the planet. The time of rotation of the planet would therefore be the periodic time of a satellite so revolving. Now this periodic time may be at once deduced from that of any of the actual satellites of Saturn : and it will be found to be less than four hours and twelve minutes : the actual time of rotation of Saturn is about ten hours and sixteen minutes : and the centrifugal force at his equator, therefore, only about one-sixth part of the centripetal.

Again, the period of rotation of Saturn's ring is equal to the periodic time of a satellite revolving round the planet at the mean distance of the ring. A particle of matter, therefore, situated in the ring at its mean distance from the planet, would have its centrifugal and centripetal force accurately balancing each other, and the annulus formed of the particles at this distance would, independently of any cohesion between its particles, continue, by the accurate proportion between the forces acting upon it, to perform its present revolutions, and if it 'crumbled to pieces,' each particular action would continue to move in its present course as a satellite. But for every particle situated within this annulus, the centripetal force is greater, the centrifugal less than those which constitute this exact equality : and for every particle without it, the centripetal force is diminished, and the centrifugal increased. All the former particles, therefore, would tend, by reason of the inequality between the forces, to approach the

planet, all the latter to recede from it : and the ring, were it not for the mutual attraction of its own particles, would, with the exception of the annulus at its mean distance, not be supported, but dissolved, by the action of the centripetal and centrifugal forces. It is indeed true that, were it to crumble to pieces, the pieces would revolve as so many little satellites; but not in the path of their present rotation, or in any circular orbits: any one within the mean distance of the ring would revolve in an elliptic orbit interior to the remaining annulus, and having the position of the body at the time of its detachment from the ring for the remoter extremity of its major axis: and similarly, any one beyond the mean distance of the ring would revolve in an elliptic orbit exterior to the remaining annulus, and having the position of the body at the time of its detachment for the nearer extremity of its major axis. What the effects of the mutual attractions and interferences of these numerous bodies would be, we need not consider: enough has been already said to show how far Dr. Arnott's statement is from truly representing all the circumstances of the case, and to show the danger of passing too easily from general statements to particular conclusions.

In these cases the wrong description of the word centrifugal force has led to erroneous conclusions: in other instances, in the passages to which we have referred, the results deduced are correct, but they are not the consequences of centrifugal force in any correct acceptation of the term. Thus we are told that 'it is owing to the centrifugal force in any bending part of a stream of water, that is to say, to the tendency away from the centre of the curvature, that when a bend has once commenced, it increases, and is soon followed by others, until that complete serpentine winding is produced which characterizes most rivers in their course across extended plains. The water being thrown by any cause to the left side, for instance, wears that into a curve or elbow, and, by its centrifugal force, acts constantly on the outside of the bend, until rocks or higher land resist the gradual progress: from this limit being thrown back again, it wears a similar bend to the right hand, and after that another to the left, and so on.' The explanation is correct, but it evidently depends not on the centrifugal force, as we have defined it, but on the force which Dr. Arnott speaks of as centrifugal, namely, the inertia with which the water tends, at every point of its course, to preserve the straight line in the direction of which it is at that instant moving. The introduction of the centre of curvature, or of any point with reference to which we estimate the centrifugal force, as 'a tendency away from' that centre,

is idle and superfluous ; and a learner might find some difficulty in discovering what this imaginary point was, or he might be in some danger of ascribing to it some sort of material existence which it does not possess. The truth is, that centrifugal force, in its correct acceptation, has no meaning, or at least no importance, except when considered with reference and in opposition to centripetal force. Where, as in the case of gravitation, there is a distinct force tending towards a particular point, which, therefore, becomes a natural and necessary *centre* to which to refer its operation, it is important to know what antagonist forces neutralize or modify its action. The approach of the attracted body to the centre of force, or its recession from it, depends merely on the relation existing between the centripetal force and that portion of the effect of inertia which acts in opposition to it : and as it is of the utmost importance to determine this approach or recession, we therefore seek to decompose the whole effect of inertia, and estimate in what manner, and to what amount, it directly resists the centripetal, or, in other words, produces a centrifugal force. Where, on the other hand, there is no force tending towards a real centre, there is generally no object in estimating the effect of inertia with reference to one arbitrarily chosen. In these cases the whole effect of inertia is generally what we have to consider : thus the effect of a running stream is produced by the whole action of the water in the direction of its motion, and though the particular circumstances under which it acts may give this motion a curved direction, it is the whole motion with which we are concerned ; and it is only introducing an unnecessary and embarrassing element into the consideration if we chuse in any way to refer it to some point which exercises no influence over it, and is merely suggested by the form accidentally assumed by the current.

The confusion which must result from the failure to distinguish between these different modes of considering and estimating the effects of inertia is sufficiently plain, and it must be very injurious, especially in an elementary work. Still it does not hinder the passage, on which we have so long been commenting, from furnishing many valuable and interesting examples ; and, as they are generally explained with much clearness, the effect, in the particular instance, is referred to its true cause, and the illustrations are but little affected by the error or ambiguity of the original position. In one instance, however, Dr. Arnott seems to have been himself led into error ; and as he takes considerable credit to himself for the theory of the standing *still*, or *sleeping*, as it is called, of

a spinning top, and speaks rather slightly of other treatises as failing to explain it, it may be worth while to suggest the following considerations :—

1. If a top spin about its principal axis (friction, atmospheric resistance, &c., being excluded), that axis will never change its inclination to the direction of gravity.

2. The rising must, therefore, depend on friction or some other force.

3. Therefore an explanation of the phenomenon, which does not mention any force but gravity, must be absurd.—See Whewell's *Dynamics*, p. 340.

The same summary mode of coming to a conclusion, which in this case seems to have satisfied Dr. Arnott too easily of the correctness of his own deductions, may probably account for an undue readiness, in some cases, to speak slightly of those of other persons ; for example, of Mr. Perkins. To the experiments of this gentleman we are largely indebted for our knowledge of heat ; and his steam-engines, although unfortunately originally brought forward before his theory was sufficiently perfected to give them the fairest chance of success, have at least answered the expectations of their constructor too well to be summarily dismissed as failures either in theory or practice ; if, indeed, they have not absolutely succeeded in establishing the soundness of the principles on which they were constructed. Dr. Arnott, however, speaks thus :—

' From misapprehension of the law of increase of force by increase of heat in water some exceedingly false conclusions have been drawn, and acted upon at great expense,—as lately by Mr. Perkins, in attempts to make engines work with an excessively high pressure. Besides making the error now alluded to and others, Mr. Perkins also overlooked the fact, that we possess no material for cylinders and pistons strong enough to bear the contemplated pressure and friction even for a moderate time. Perhaps more striking examples could not be adduced of the absurdities into which even highly ingenious men may fall, when ignorant of those general truths of nature on which all branches of art are founded, than in the history of supposed inventions and improvements connected with the steam-engine.'—p. 382.

Another of Mr. Perkins's inventions is treated with severity of a different kind. After describing the construction of the steam-gun, Dr. Arnott says,

' The rapid succession (of bullets) resembles the issues of water from a jet pipe ; and if such an engine could be used in a field of battle, its barrel of death, made to point gradually along a line of men, would mow them down like corn-stalks before the scythe—none could escape. *The horrible idea and proposal have been*

*excused by saying, that to prove the possibility of such carnage must have the effect of putting an end to war altogether.'*—p. 386.

Surely it is too late now to affect expressions of horror at any contrivance to render more formidable the means of warfare, and especially those which render the art of defence equal to that of attack, which confine themselves to the destruction of hostile forces, and are so within the control of their employers as never to endanger the peaceable and unoffending inhabitants of a country. All history proves that improvement in the art and mechanism of war has been accompanied by a mitigation of its ferocity, and even a diminution of its bloodshed ; and it is the mere affectation or thoughtlessness of humanity to close the eyes against uniform experience, and then to profess disgust at any new discoveries to which only this voluntary blindness can attribute effects different from those hitherto resulting from analogous inventions.

We must pass rapidly over much that follows, referring only to the account given in page 72 and the following pages, of the composition of forces as popularly and well explained in general, but furnishing many instances in which a defect in strict accuracy of statement produces the same sort of mischief, even where the passage is in the main correct, which we have already seen to result in other cases from actual error. We would particularly refer to the following passages :

' A body suspended, as a plummet, or falling to the earth, as an apple does from a tree, is always in a line towards the centre of the earth ; for while the part of the earth immediately under the body is pulling it straight down to the centre, the action of parts on any one side of the perpendicular is exactly counterbalanced by the action of corresponding parts on the opposite side, &c.'

A position very nearly correct, though the direction is not accurately towards the centre of the earth, but which depends for its truth on the figure of the earth, which is not mentioned as any element in the demonstration. Again,

' If a line be given representing a single force, or result of forces, as *b a*, and if it be desired to know how much force there is in the resultant capable of acting in another direction, as *b c*, and in another as *b d* ; it is only necessary to draw lines in these directions from the commencement of *b a*, and to cut such other lines by others drawn directly upon them, or at right angles to them, as it is termed, from the other end ; the lengths of *b c* and *b d* so cut off show the proportions required.'

The figure by which the passage is illustrated, places the lines *b c*, *b d*, at right angles to each other ; but it is evi-

dent that this is no condition of the problem, and the directions given for the determination of the lines cut off are therefore incorrect. Whether the error proceeds from referring merely to the particular instance, or whether it was intended to advert to the advantages of decomposing a force in the direction of two rectangular co-ordinates, (which, however, is nowhere directly stated,) it is not material to inquire.

These may be thought minute observations, but they illustrate very clearly the nature of the inaccuracies we complain of. In the instances already adduced they will sufficiently show the kind of error into which the reader is frequently betrayed, and a careful perusal will find too many other cases of the same kind. We shall confine ourselves in our remaining remarks to a few passages in which either the importance of the subject, or the amount of inaccuracy involved, makes it peculiarly desirable that the error should be pointed out.

The first of these is the description of the pendulum. Dr. Arnott appears here to have felt the difficulty of treating the subject without regular mathematical discussion, and it is due to him to say, that he has, nevertheless, explained much, very clearly, without it. The only material failure seems to be in the exhibition of the manner in which the length of a pendulum influences the time of its vibration :—

‘ Long pendulums vibrate more slowly than short ones, because, in corresponding axes or paths, the bob or ball of the long pendulum has a greater journey to perform, without having a steeper line of descent. If one pendulum be twice as long as another, it has twice as much to fall in its descending arc, while in corresponding parts of the two paths, the slope or inclination is always equal—the ball of the long pendulum may be considered as having rolled twice as far *down a given slope* as the ball of the short pendulum. Now, as a body falls four times as far either directly, or on any uniform slope, in two seconds as in one, a pendulum must be four times as long to beat once in two seconds, as to beat every second.

—p. 87.

The argument clearly depends entirely on reducing the use of a pendulum to the known case of a body falling down an uniform slope, and the passage referred to does not pretend to deal with any other case; but it is obvious that this is widely different from the case of a pendulum, where the rate of inclination varies at every consecutive point, and the manner in which the result is produced can only be understood by actual proof and minute discussion. The fault of the passage is not so much that it fails to

explain the result, as that it professes to do so; for no learner can read it, and suppose it satisfactory, without habituating his mind to acquiesce in doubt and confusion.

There are few notions connected with mechanical sciences so important as that of the centre of gravity, and the ascertainment of its existence, therefore, demands the most careful consideration. It is by no means an obvious truth that such a point always exists. How then is it to be found? Dr. Arnott has taken a very short course:—

' If any uniform beam or rod be supported by its middle, like a weighing beam, the two ends will just balance each other . . . . If equal weights be afterwards be attached in corresponding situations on the two arms of the beam, the balance will not be thereby disturbed; and the operation of adding weights that counterpoise, above and below, and near and far from the centre, may be continued until a bulky mass is built up upon the beam; or, instead of a beam, a wheel may be used, yet the whole will remain perfectly supported, and in equilibrium about the original centre. Now, in every body, or mass, or system of connected masses, in the universe, there is a point of this kind about which all the parts balance or have equilibrium, and it is this point which is called the centre of gravity or of inertia. . . . . This centre in a mass of regular shape and of uniform substance, as in a ball or cube of metal, is easily found, because it is the apparent centre of the form; but in bodies that are irregular, either as to density or form, it must be found by rules of calculation, hereafter explained.'—p. 117, 118.

Perhaps we should be wrong in supposing that the early part of this passage is meant to do more than illustrate the notion of the centre of gravity, and the existence of such a point generally may be left to depend on the mere assertion of the author. If it be so, it furnishes strong testimony of the insufficiency of the mode adopted to give any thing like complete information, and it is also to be regretted that the reader is not more expressly apprised that the introductory part is illustration, and not proof. If, on the other hand, it is intended that the reader should consider the passage to establish the existence of such a point, it can hardly be necessary to call attention to its complete insufficiency, declaring the fact, as it does, only from the symmetrical arrangement of particles round a point in particular cases, and thence assuming its existence in the only cases of difficulty, namely, those in which the particles are not symmetrically arranged.

The only remaining passage on which we shall make any detailed remarks, is one to which we attach considerable importance, not so much on account of the interest which belongs to the class of speculations with which it is con-

nected, as on account of the bad example which it sets of a loose and careless habit of acquiescing in plausible arguments, without sufficiently examining either into their soundness, or into their correspondence with the facts in question. ‘Strength,’ we are correctly told in page 193, ‘depends on the magnitude, form, and position of bodies, as well as on the degree of cohesion in the material. Of similar bodies the largest is proportionably the weakest.’ These positions are illustrated by experiments on the different lengths of projecting bodies, in proportion to their breadth and depth, which are supported by the cohesion of their particles, or the different weights which they will support: and the conclusion is deduced, that any such mass may be made to project so far as to be broken off by its own weight; and that this will also be the case if it be supported at both ends, or, indeed, however supported, and of whatever shape. With one qualification, namely, that there must be some part of the body unsupported, for it is the weight of the unsupported part which produces these phenomena of fracture, this deduction is correct; our objection is to its application.

‘Beyond a certain limit no proportions whatever will keep a body together in opposition merely to the force of its own weight. This great truth limits the size and modifies the shape of most productions of nature and art—of hills, trees, animals, architectural or mechanical structures, &c.

‘*Hills.*—Very strong or cohesive material may constitute hills of sublime elevation, with very projecting cliffs and very lofty perpendicular precipices, and such accordingly are seen where the hard granite protrudes from the bowels of the earth, as in the Andes of America, the Alps of Europe, the Himalayas of Asia, and the Mountains of the Moon in Central Africa. But material of inferior strength exhibits more humble rising and more rounded surfaces. The gradation is so striking and constant from granite mountains, down to those of chalk, or gravel, or sand, that the geologist can generally tell the substance of which a hill is composed by observing the peculiarities of its shape. Even in granite itself, which is the strongest of rocks, there is a limit to height and projection; and if an instance of either, much more remarkable than now remains on earth, were by any chance to be produced again, the law which we are considering would prune the monstrosity.’—p. 194-5.

There are many other applications of the same argument to the cases of vegetables, animals, &c., which it is not necessary to extract. It should, however, be mentioned, that in some of them the impossibility of any very great increase of magnitude is ascribed to the danger of *crushing* the material of which the things in question are composed, and to that only.

Now, in the first place, the experiments on projecting bodies, on which alone the argument is founded by the author, have nothing to do with the question of *crushing*. The rate in which the danger increases is itself different, for Dr. Arnott shows, that the forces which tend to produce fracture increase more rapidly than the dimensions of the body; while the force which produces crushing is weight alone, and increases merely in the same proportion as the column pressing upon any particular point. The instances given, therefore, which are stated to depend on crushing, may be correct in themselves, but they refer to a different principle from that to which 'the great truth which limits the size of most productions of nature and art' is ascribed.

But, besides this, although the projection and overhanging of rocks will be limited in the manner suggested, the height of mountains will be quite independent of it. It may, indeed, be modified by the danger of *crushing*, and to this Dr. Arnott may refer, when he says, in p. 195, 'In the moon, where the weight or gravity of bodies is less than on earth, on account of her smaller size, mountains might be many times higher than on earth; and observation proves that the lunar mountains are in fact very high.' The danger of crushing would, of course, diminish with the diminution of gravity. But, except from this cause, no elevation could endanger the stability of a mountain which did not overhang, unless it was so great as to make the centrifugal force at its summit superior to the centripetal: and it certainly is not to such imaginary cases as this that the passages in question can refer.

But independently of these considerations, which may seem rather to affect the strict accuracy of the statement than the general truth of the explanation, how do the facts stand? Is it the danger either of crushing or of breaking off the projecting portions of a mountain, which principally determines its height and shape? and does the height so correspond to the strength of the material, as by itself to furnish any valuable information with respect to the constitution of the mountain?

On the latter question it may be sufficient to refer to the great variety of elevations assumed by the same substance in different places; to contrast, for instance, the little elevation of the small granitic portions of England, not merely with the great heights which granite attains elsewhere, but with the loftier ridges of other rocks in their immediate neighbourhood: and to advert to the fact that many considerable mountains consist of a variety of strata, some harder and

some softer, and that all these would have to be taken into account, even upon Dr. Arnott's own principle, before the constitution of the mountain could be ascertained from its elevation only. We may also remark, that in the Alps, limestone is found in very high positions, and in steep, abrupt faces: the granite is the highest, but the limestone is, in some cases, at an elevation nearly as great. In opposition to the Doctor's theory it may be added also, that serpentine, one of the most tenacious of rocks, is never found to form mountains or high hills.

Again, the general proposition may be true, though it is not to be received without large allowance for overstatement, that 'material of inferior strength exhibits more humble risings and more rounded surfaces.' But in ascribing this effect to the quality of the material, is the danger of crushing, or breaking off, to be the only, or even the principal thing attended to? There are very few ways in which the latter is likely to happen; the most obvious are where a mountain originally overhung, or where, either by the undermining or crumbling away of some soft inferior stratum, or by the alteration of the position of the whole mass by some violent convulsions, part, originally supported by matter under it, is left to depend on its own cohesion for its stability. Even of these possible causes the two latter are not even suggested. But it will be in a very small number of instances comparatively, that the effect of softness and structure, evident as it may be in its results, is thus to be explained: and that knowledge is not only imperfect but erroneous, which, in attributing observed appearances to such causes, neglects to trace their operation under the different circumstances to which the materials appear to have been exposed. The hardness or softness, the brittleness or toughness, of different earths or rocks, their liability to the action of heat, of moisture, or of air, their crystalline or other character, their disposition in strata, or in more irregular masses, are all circumstances which, under the various changes to which they have been exposed, will produce a marked and traceable effect. The action, indeed, either of the earthquake or of the deluge, the dislocations produced either by elevation or depression, will generally act with most power on the substances of weaker consistence: but this does not render it the less necessary to point out the forces to which the surface of the earth appears to have been exposed, and to trace the manner in which it has been modified, (even where this is correctly referred to the character of the rocks of which it consists,) to the causes which have really enabled that character to pro-

duce the effects explained. Without this, the reader is not merely permitted, but he is led to believe that the whole result is produced in a manner which really is of rare and partial occurrence : and looking to the work of Dr. Arnott as one devoted to education, in which point of view alone it falls within our scope to consider it, we know no tendency more mischievous than that which such reasonings possess. They accustom the mind to acquiesce in an imperfect knowledge, and to assume, because a particular fact will plausibly account for some appearances, that it need look no farther, but may rely on that one fact as the occasion of all it sees.

We must again advert to the circumstance, that the fullest developement of scientific subjects which can be given in such a work as Dr. Arnott's, is, after all, a very imperfect one ; and this makes the mischief of such inaccuracies as we have pointed out greater than it would be in a more regular treatise, because the reader is less capable of detecting the error into which he may be led. He is not furnished with the means of absolute demonstration ; he ought therefore to be disciplined into caution. With this observation we conclude. It would have been more agreeable to direct attention principally to the various merits of the work as addressed to the largest proportion of readers, instead of pointing out errors. We have already mentioned the general nature of these excellencies ; but we ought not to omit all mention of the very interesting medical and anatomical illustrations which form a principal department of the work, and which might perhaps entitle it to notice as a treatise of professional education. It is, however, as a work of general circulation, that it is of most importance : and it is because its merits and popularity, and the pretensions which it advances to set the fashion of a new style and order of education, render any error in its fundamental principles of extensive danger, that we have thought it material to subject it to somewhat minute, and it may seem, severe examination. The mischief of any such error, in any branch of elementary instruction, is great ; but it is greatest if it affect those subjects to which recourse is commonly had to correct any vague or loose habits of mind, which may have been allowed to grow up during the acquirement of other branches of knowledge.

## GEOGRAPHY OF ANCIENT ASIA.

*Two Essays on the Geography of Ancient Asia, intended partly to illustrate the Campaigns of Alexander, and the Anabasis of Xenophon.* By the Rev. John Williams, Vicar of Lampeter, and Rector of the Edinburgh Academy.

THESE two essays of Mr. Williams, being designed to effect a complete revolution in our geographical systems of ancient Asia, deserve some examination. The Edinburgh Review has already given its sanction to Mr. Williams's new system; and we perceive that, on one most important point, the site of Ecbatana, a learned German\* has adopted, perhaps without inquiry, the same conclusions as the English critic.

The main design of the first essay is to demonstrate that Ispahan is on or near the site of Ecbatana, the ancient capital of Media. It is well known to those who are conversant with the ancient geography of Asia that three different positions have been assigned as the site of the Median Ecbatana—Tabriz, Hamadan, and Ispahan. The claims of the first town are now entirely set aside; and indeed no person who had the most superficial knowledge of Asiatic geography could for a moment have advanced such an hypothesis. Hamadan and Ispahan are at present the two rivals, and the latter has won the favour of Mr. Williams. The 'Geographical Memoir of Ecbatana' contains so much that is really foreign from the question, that we should hardly know how to handle it, if Mr. W. had not himself prescribed the precise and true way of treating the subject. In p. 10. he remarks :

'In attempting to impress the Society (the Royal Society of Edinburgh) with the conviction that Ecbatana was either on the site, or in the immediate vicinity of Ispahan, my intention is to prove the truth of my own supposition, without alluding to previous theories, for the establishment of the truth necessarily includes the refutation of errors.'

In the same way, without examining the testimony of Diodorus and Arrian, or Mr. Williams's exposition of their geography, which we do not think positively decisive either way, we will put the question on the Itinerary of Isidore of Charax, and contend that, by this alone, Hamadan is proved to occupy the site of the Median Ecbatana. Mr. W. also has tested his theory by the Itinerary of Isidore, and at the conclusion of his examination of it he remarks (p. 65), 'on the whole, every candid reader will allow, that if Isidore's Itinerary does not (as far as it has been examined†)

\* Mr. Lassen of Bonn, in his review of Bopp's Sanskrit Grammar. (Indische Bibliothek. 1830.)

† This is an important reservation—Mr. W. has not examined it.

terminate at Ispahan, there must be a greater number of accidental coincidences, than ever before occurred to confirm an error.' The question then between Hamadan and Ispahan may be fairly tried by this Itinerary.

The Itinerary of Isidore, entitled *Σταθμοὶ Παρεπίδημοι*, is probably a fragment of a larger work. It begins at *Zeugma* (the modern *Bir*) on the Euphrates, and, taking the line of a commercial route, passes through *Anatho* on the Euphrates, *Seleuceia* on the Tigris, *Ecbatana*, *Rhagæ*, the *Caspiae pylæ*, and terminates at *Alexandropolis* in Arachosia. The Parthians, Isidore remarks, call Arachosia by the name of White India. The Itinerary between Zeugma and Seleuceia has no connexion with the present question : the position of Seleuceia also is well known (lat.  $33^{\circ} 8'$ , long.  $44^{\circ} 38'$ , on the Tigris, about twenty geographical miles below Bagdad) ; and we shall, therefore, with Mr. W., begin our examination from this point. The following is a translation of the Itinerary between Seleuceia and Ecbatana.

' Next\* to Seleuceia commences the province of Apolloniatis, the route through which is thirty-three schoeni. It contains several villages, which serve as *σταθμοὶ* (halting-places), and a great city, Artemita. The river *Silla* flows through the city, which is fifteen schoeni from Seleuceia. Artemita is now called Chalasar.

' The next province is Chalonitis : the route through it, twenty-one schoeni. It contains five villages, halting-places ; and Chala, a Greek city, fifteen schoeni from the borders of Apolloniatis. Five schoeni further is the mountain range of Zagros, the boundary of Chalonitis and Media.

' Next comes Media, twenty-two schoeni. It begins with the district of Karina, which contains five villages, halting-places, but no city.

' Then Cambadene, thirty-one schoeni. The villages are five, being also halting-places or stations. There is one city called Baptana, on a mountain, where there is a figure (*ἄγαλμα*) of Semiramis, and a pillar.

' Then Upper Media, thirty-eight schoeni. The city of Konkobar, with its temple of Artemis, is at the commencement of the province, three schoeni from the borders of Cambadene ; then Maziniaman, a custom-house, three schoeni further : then to Adragianas, a royal residence among the Batani, which Tigranes the Armenian destroyed, four schoeni ; and thence to Apobatana, the capital of Media, where there is a treasury, and where they perpetually sacrifice to Anaitis, twelve schoeni. Beyond this are three villages, which are stations.'

\* Hudson's *Minor Geographers*, vol. ii.

Apobatana is Isidore's name for Ecbatana, such changes being commonly enough made by Greek writers whenever they fancied a foreign word, or part of a foreign word, to contain something like a Greek root. Mr. W. also contends that Apobatana and Ecbatana are the same place, a fact of which we shall soon have no doubt when we come to a more particular examination of the Itinerary. Mr. W. then proceeds to deduce the value of the schoenus, which he says he has no doubt is the same as the royal parasang of ancient Persia. Following the line of the Itinerary he computes the distance on the map between the Zeugma of Isidore and Seleuceia on the Tigris to be five hundred and sixty-five miles (geographical or English he does not say); he then divides this result by one hundred and seventy-four, the number of schoeni between Zeugma and Seleuceia, and finds that 'three miles and a quarter on the map answer almost to a nicety to the schoenus of Isidore.'—Again:

'The total of the distance between Seleuceia and Apobatana amounts to one hundred and twenty-nine schoeni; which, reduced to the above rate, give four hundred and twenty miles within a fraction. The distance between Seleuceia and Ispahan on the map is four hundred and twenty-four miles,—a coincidence for which nothing, except a very close approximation to the truth, can account.'

Let us see if we cannot account for this coincidence, without admitting Mr. W.'s conclusion. Mr. W. first of all deduces a value of the schoenus in miles by following the *track of the Itinerary* along the Euphrates, and by comparing this line of distance with the schoeni of Isidore. Now it is not worth while showing that we do not know the course of the river accurately enough to avoid an error of at least one hundred miles\* in reckoning so long a distance; but this is a fact of small importance compared with the application which the author makes of the value of the schoenus thus discovered. Mr. W. puts one leg of his compasses on the ruins of Seleuceia, and whisking round the other with his radius of four hundred and twenty miles, he cuts through Ispahan, which, *therefore*, is Ecbatana. The only fault of this method is, that it goes on the supposition of the line of road between Seleuceia and Ispahan, when reduced to what

\* Mr. W. seems, in another part of his book, to be of the same opinion; for, in p. 144, speaking of the distance between Thapsacus and Babylon, which is the greatest part of the line of Isidore's route, he has the following remark, in which we fully concur:—'As the road from Thapsacus to Babylon must have, in the desert, followed the course of the river in its various bendings, we can draw no certain conclusions until that part of the stream of the Euphrates be better mapped than it is at present.' And yet this very track, which in one part of his essay he considers to be unknown, he here considers to be perfectly well known.

he calls map distance, being *perfectly straight*, and having no bend or angle in it,—a supposition, however, quite sufficient to vitiate the result, if there were no other objection. In fact, this coincidence of the *road* distance and the *map* distance, proves that Ispahan is not Ecbatana\*.

Mr. Williams adds, after this application of the compasses—

'There may, however, on examining the Itinerary in detail, such discrepancies be discovered which may, in a considerable degree, invalidate the general conclusion. This, therefore, must be obviated by a minute examination of the whole route.'

In examining the ancient Itineraries we are never sure that we are on the right line of road, unless we find occasionally some place that preserves its name, or some remarkable natural or artificial object to serve as a land-mark, and enable us to fill up the intervening spaces with probability. Distances are continually fallacious, for the causes of error are numerous : we must, therefore, look for other assistance. Now Mr. Williams, in examining the names which Isidore gives between Seleucia and Ecbatana, (assumed to be Ispahan,) is not able to assign the position of one single place with the least show of probability. He can find no route that he can trust, and for a very good reason, the country possessing no inducement to travel through it. A passage of Strabo † misinterpreted, and a number of very vague conjectures, are all that we find, and for a more minute knowledge of them we refer those who wish to possess it to p. 61, &c. Mr. Williams, in the beginning of his essay, considers it a strong presumptive evidence in favour of Ispahan being on the site of Ecbatana, that nearly all the great cities of antiquity have their modern representatives some where in their neighbourhood. This is perfectly true, but applies with perhaps nearly equal truth to great lines of road. Now of all the roads that run from Bagdad (which, as we have remarked, is only about twenty geographical miles from Seleucia) none is so well known as that through Kermanshaw to Hamadan. It has been the ordinary route of travellers from Bagdad to

\* Let us reverse Mr. Williams's mode of proceeding : suppose that Ispahan is proved to be Ecbatana, the compass distance from Seleucia is four hundred and twenty miles, corresponding to one hundred and twenty-nine schoeni; therefore 1 schoenus =  $3\frac{1}{2}$  miles on the map. Now, suppose we want to find out where Bir is on the Euphrates ; the distance in schoeni from Seleucia is 174, which are equal to 565 miles. Fix one leg on Seleucia, and cut the Euphrates with radius of 565 miles (we are supposed to be ignorant of the *direction* of the route between the two extreme points, as in the case between Seleucia and Ispahan), and we cut the Euphrates not at Bir, but at a point *more than three degrees* north of it.

† Lib. xvi. p. 744, Casaub. *νέα τε καί μέτις* is translated 'nearly direct east.'

Ispahan, or from Ispahan to Bagdad \*, for a very long time up to the present day.

On this line of road, twenty † miles beyond Kermanshaw, we find the sculptured rocks of Besittoo, which we believe to represent the Baptana of Isidore, and the Bagistana (garden or park district) of Diodorus. Besittoo is about seventy miles from Hamadan; but the distance of Baptana from Ecbatana cannot be deduced from Isidore, because he does not state in what part of Cambadene it is situated.

But it may be said, where is the pillar of Semiramis? We must admit that Ker Porter could not find it, though Olivier describes it, and gives a picture of it ‡. Mr. Williams places Baptana, however, between Shuster and Ispahan, about two hundred and twenty geographical miles S.S.E. of our Baptana; and then he adds—‘I have no information to communicate on the subject of the intervening stations between Cambadene and Ecbatana.’ But the map which accompanies Mr. Williams’s essay has some very important information, which it is quite impossible to conceive how he could have overlooked. As we advance from Besittoo towards Hamadan, we find the ruins of the magnificent temple of Kungavar, distant from Hamadan about forty-five miles §. The Konkobar of Isidore and the Temple of Artemis are nineteen schoeni from Ecbatana. Whether the Kungavar of modern travellers and the Konkobar of Isidore are the same place, we leave to the judgment of our readers. If they believe them to be the same, the inference as to the site of Ecbatana is obvious. It is singular that Mr. Williams, who is acquainted both with Kinneir’s map and Memoir, and who has also inserted in his own map the positions of Besittoo and Kungavar, should have treated the former position so briefly, and not have mentioned the latter at all.

As to the value of the schoenus, if we compare the distances given between Hamadan and Kungavar, the nineteen schoeni of Isidore with the forty-five miles of Kinneir, we shall find the schoenus of Isidore (which we presume to be a road distance) equal to  $2\frac{1}{3}$  English miles of road distance. This result may be very inexact, owing to inaccuracy in Isidore’s distance, or to corruption of the numbers in the Greek text, or to the inaccuracy of the modern estimate of the distance, or to all these causes combined. We have not

\* See, for example, Tavernier’s Travels; his route, in book iii., chap. 6., passes through Kungavar (*Kaynab*), leaving Hamadan on the north.

† We take the authority of Kinneir’s Memoir of the Persian Empire, p. 130, whose map Mr. Williams has referred to.

‡ Olivier, vol. iii., p. 23, but he refers it to the era of the Sasanides.

§ See Ker Porter, vol. ii., p. 140. Kinneir, p. 129. Olivier, Thevenot, &c.

attempted, in this examination, to deduce the value of the schoenus from comparing modern routes between Hamadan and Bagdad with the Itinerary of Isidore, because we cannot find one which we can trust. We, therefore, leave undecided the question of the value of the schoenus, as its *precise* estimation is not necessary for deciding the site of Ecbatana.

We have already remarked that we consider it unnecessary to examine Arrian and Diodorus in order to decide the question. The evidence of the former will not decide the dispute; and that of the latter is generally to be suspected, when not confirmed by other authority. As far as Arrian and Diodorus have made any impression on us, it is in favour of Hamadan; and this may be considered as a sufficient reply (for this part of the subject) to Mr. Williams's conviction 'depending on moral grounds' (see p. 27) that Hamadan is not Ecbatana.

Before we dismiss the subject of Ecbatana, we must notice the curious and ingenious use which Mr. Williams has made of a quotation from Eratosthenes (found in Strabo, book ii.). Eratosthenes, as ordinary readers understand him, means to say that Thapsacus, Gaugamela, Arbela, *Ecbatana*, and the Caspian pylæ, lie pretty nearly in the same line of equal length of days, or, in other words, nearly in the same latitude. But Mr. Williams very dexterously contends that this is the *Assyrian Ecbatana*, a place, according to him, quite distinct from the Median capital. Strabo, whom Mr. Williams makes use of to prove that Artemita is nearly due east of Seleuceia, is discarded when he does not answer the purpose, and we are told (p. 67), that 'it may be doubted whether Strabo was acquainted with the true position of Ecbatana or not.' And yet we find Strabo quoted immediately after to prove the position of certain mountain tribes, whose abodes are rather more variable than the site of Ecbatana. We believe with Mr. Williams that Strabo did not well comprehend the geography of eastern Asia, and this may have arisen in part from his not having used any tabular construction by which he might rectify and test his description. This was the opinion of Major Rennell, and may, perhaps, explain in part the monstrous blunders to be found in the eastern geography of Strabo.

Mr. Williams has added a few remarks on the Syrian Ecbatana, where Cambyses died. Pliny informs us it was on Mount Carmel, which is as hard to believe, as when he tells us (Lib. iv. 7.) that the demus Thria was near Marathon. Mannert (*Geographie von Arabien, &c.* p. 277) suggests that the Ecbatana of Herodotus may be Bathyra, east of the Jordan, which is called Ecbatana in the Greek text of Josephus. The German geographer cannot imagine why

Cambyses should turn out of his way to Carmel, when he was hurrying to Susa to punish the usurper of his throne. Mr. Williams gives the following solution, p. 72 :

' Is it not difficult to conceive why Cambyses, summoned home-wards as he was by a most formidable and successful conspiracy, should have turned aside and have visited the heights of Mount Carmel, except on the supposition that the bigoted monarch wished to purify himself from the pollutions of the bestial gods of Egypt\*, by offering sacrifices after the manner of his ancestors, at the Syrian Ecbatana ? '

Let the reader decide for himself.

The second essay of Mr. Williams is on the geography of the Anabasis, a subject of considerable difficulty, and one in which certainty on some points is hardly attainable. After a careful examination of Mr. Williams's essay, and Major Rennell's ' Retreat of the Ten Thousand,' we are of opinion, that the Major is, on all the important points, right, and that Mr. Williams is nearly always wrong.

It would be impossible to examine minutely, in so limited a space, all the points in which we differ from Mr. Williams, and therefore we must confine ourselves to a few. We will begin with the position of Thapsacus, which is generally placed at El Der : Mr. Williams places it opposite to Racca, and near the ' Surieh of Arrowsmith's map,' which is on the Euphrates, about sixty geographical miles in a straight line N. W. of El Der. Mr. Williams's proof of the position of Thapsacus is, in one striking particular, like his proof about the site of Ecbatana. He wishes to show that there were *three* passages of the river by the name of Zeugma : one Zeugma Mr. Williams calls the Commagenian, and places at Samosata : a second, (which he considers to be the Zeugma of Ptolemy, Isidore, the Peutinger tables, and the Antonine Itinerary,) he places at Bir, and calls the Cyrrhestic ; and the third is the ancient Zeugma of Strabo, otherwise called Thapsacus. The passages in Strabo † distinctly show that he thought there were only *two* places called Zeugma ; and further, that neither of these is at Samosata, but that one is the old Zeugma or Thapsacus, and the other near the boundary of Commagene and Mesopotamia. One of the passages of Strabo referred to (p. 749), is thus translated and commented on by Mr. Williams (p. 129). The uppermost Zeugma, he remarks, was at Samosata, thus described by Strabo :

' Commagene is small, but has a strong city Samosata, in which was the royal palace. The country is now a Roman province.

\* But Cambyses mocked the bestial gods of Egypt, and killed them.

† Strabo, p. 664, 747, 749. Casaub. Ed.

The territory around Samosata is small but very fertile. *There at present is the Zeugma of the Euphrates.*\*

The words in italics are thus printed by Mr. Williams, as proving this Zeugma to be at Samosata; but we pray those, who will treat a Greek author fairly, to say if this passage can be tortured to mean anything beyond this, that the Zeugma is in Commagene. And this interpretation is the only one that will accord with the passages (p. 746, 747), where Strabo speaks of it as near the boundary between Commagene and Mesopotamia. We consider then that there is no difference between the Cyrrhestic Zeugma (Bir), and the Commagenian or Strabonian Zeugma (which Mr. Williams places at Samosata); we put them both at Bir. Mr. Williams, having settled his Zeugma at Samosata, proceeds to measure distances, a very dubious operation in a part of the world not well known, and a peculiarly unsuccessful one in his hands. Eratosthenes says\*, that it is forty-eight hundred stad. from Babylon to Thapsacus, along the river; and two thousand more from Thapsacus to Zeugma. The distance given by Eratosthenes along the river from Babylon to Thapsacus Mr. Williams does not rely upon, because, as we have already remarked, he has no confidence in our maps of that part of the river. But for the line between Thapsacus and Zeugma, he does take the measurement of Eratosthenes; he also makes the distance on our maps between Surieh and Samosata to be one hundred and forty miles, (English we suppose); and then by estimating the stad. at the rate of fifteen to a mile, the distances agree wonderfully well. We make the same distance to be at least one hundred and fifty geographical miles, or about one hundred and seventy-five English miles. But how can such a difference arise? 'I regard,' says Mr. Williams, 'the elbow at Balis as infinitely exaggerated,' and accordingly, in his reckoning, he cuts it off. This is one of the numerous instances in these essays in which the author tells us that he has private reasons †, which he does not communicate, for knowing some very important facts.

We do not think that any careful geographer can admit Mr. Williams's mode of measurement, which is nothing more than making the distances fit the theory. But what must we say to the following extract, p. 144.

'We have before seen, that the Zeugma of Strabo was the bridge across the Euphrates at Samosata; but here he repeats his definition in order, as it were, to avoid ambiguity: the distance between the Zeugma in Commagene (where Mesopotamia commences) and Thapsacus ‡ is two thousand stadia.'

\* Strabo, p. 746.

† See p. 69. 208.

‡ Strabo, p. 746.

If Mr. Williams's theory of the Zeugma being at Samosata is true, and if Mesopotamia commences at the Zeugma of Strabo, as it really does, then Mesopotamia commences at Samosata, which certainly is not true, even according to Strabo.

The author has spent unnecessary labour in establishing Nicephorium on the site of Racea (which cannot be disputed), for the purpose of thereby proving \* the site of Thapsacus to be opposite to it. We differ altogether with him on this point, and do not consider the position of Thapsacus to depend on that of Nicephorium. The author's reasons for asserting this connexion may be seen p. 132.

Among other things contained in these reasons, we cannot see how, according to the figures in the author's book, Thapsacus, which is on one side of the river, and in Ptolemy's longitude  $73^{\circ} 10'$ , can be said to be opposite to Nicephorium, which is on the other side and in longitude  $75^{\circ} 5'$ . Possibly these may be typographical errors. Also, we cannot comprehend the following remark—‘it may be etymologically inferred, that, as the Macedonian Amphipolis occupied both banks of the river Strymon, Thapsacus, on which they conferred the same name, had also a city on the opposite banks of the Euphrates to face it.’ If the Macedonian Amphipolis had been on both sides of the river, which it was not, the comparison would have been more apt.

There are difficulties about the site of Thapsacus, which we do not pretend to be able to remove†; but it seems more probable that Thapsacus is at El Der than opposite Racca, at least till better reasons can be given for Racca than Mr. Williams has yet found. We cannot conclude this tedious, but not uninteresting subject to scholars, better than in the author's own words: ‘I fear that my readers will feel as wearied of the names of Thapsacus and Racca as I feel myself; but they must remember, that, had the proof been very direct and easy, it would not have remained so long unknown.’

Our labour would be endless were we to follow Mr. Williams and the retreating Greeks through all the difficulties of their route, and the still greater difficulties of the numerous citations which the author has collected. There is a short dissertation on the site of Opis, a town which the Greeks passed by in their retreat, and the author, at the close of his

\* The principal argument is, that the epitomizer of Strabo makes the distance of Nicephorium and Thapsacus one hundred stadia. We leave this assertion to have its full weight, which is about as much as that of the passage in Strabo, where, by some odd blunder, Thapsacus is said to be seven stadia from the Mediterranean.

† See Xenophon, *Anabasis*, i. 4. 18, 19, 5, 1. Rennell's *Anabasis*, p. 60.

remarks, ‘assumes it as a fact, that the Opis of Xenophon was about seven miles above the Koote of the map. It is from this spot that I commence the return of the Greeks up the river.’ This is the most startling assumption in the whole book, and only equalled by the importance of the results which flow from it. Between the point where Major Rennell makes the Greeks cross the river on their retreat northward, and the assumed point of our author, there are no less than eighty geographical miles in a straight line; the assumed point of Mr. Williams, of course, is the more southerly. It would be rather curious, if there were nothing on the line of route, which should decide between two such conflicting theories. We believe, however, there is ample evidence of Mr. Williams being wrong. But those who wish to understand the question well must study it, and neither take the assertions of Mr. Williams on credit, nor our own, which are necessarily less supported by proof, owing to the narrow limits within which the nature of a periodical publication confines us. Major Rennell considers that among other proofs of his map construction being right, we now find a Zab, which corresponds to the Zabatas or Zapatas of Xenophon; and we also find, on the west bank of the Tigris, a *Senn*, the probable representative of the *Kauai* of Xenophon\*. Of *Kauai* the author remarks: ‘nothing more is known of it;’ and he adds, the *s* of Xenophon may have been a *x*, in which case ‘it might have been’ Coché. This is quite true, and by altering some more letters, it might be made like any other word you choose. Coché itself (*Kauai*) is a well known place, close to Seleuceia on the Tigris, and within one day’s march of the Diala (Mr. Williams’s Zabatas). But Xenophon makes *Kauai* (Anab. ii. 4, 28) more than three days’ march from the Zabatas (whatever may be the real modern name of that river is unimportant for the present purpose); and consequently the author’s measurements and etymological conjectures are quite at variance.

In p. 196, the author, like some kind people when they have bad news to announce, prepares us to receive with resignation his new theory about the Zab:—

‘Before I proceed, it is only a prudent step to conciliate the reader, who, although in a slight degree prepared for some innovations on received ideas, may yet be shocked at the suggestion that the Zates† of Xenophon is represented by the Diala, and not by the universally

\* That the Greek *s* is often the representative of a Persian and Sanskrit soft *s*, is well known to philologists.

† The author lays some stress on the MS. reading in III. 3, 6 being *Zaww* as it really is; but a comparison with II. 5, 1, shows that *Zaww* is the true reading.

received Greater Zab. Nor can I do this more effectually than by showing, not from my own measures and calculations, but from physical causes, that the Greater Zab could not have been the Zates.'

We are indeed shocked at it very much, and would as soon believe the author if he wrote Mississippi instead of Diala. Mr. Williams's objection is briefly this: the Zab, he asserts, is a river very dangerous to pass, and as Xenophon says nothing of the difficulty of crossing the Zapatas, it is certain that the Zab is not the Zapatas of the Anabasis. Those who have leisure, and are fond of assertions without proof, may read a little further (p. 197). Mr. Williams quotes Rauwolf to prove the river was not very easy to ford in January, 'when,' as Mr. Williams says, 'the streams of Mount Taurus are at a low ebb.' But the streams of Mount Taurus are certainly at a lower ebb in autumn when the Greeks crossed the Zab than in January; and a mountain river like the Zab, one full mile broad, as Rauwolf describes it, where he crossed, is not so formidable an obstacle as many other streams one hundred yards wide. Again—Niebuhr's account is given, who crossed it 'when the spring swell was commencing,' in the month of March, and found it dangerous and difficult. All mountain rivers are dangerous after heavy rains, such as occurred before Niebuhr crossed the Zab, and such as had rendered even the passage of the Little Zab very formidable to him. But Mr. Williams should have added something else that Niebuhr says about the Great Zab (vol. ii. p. 344. Copenhagen Ed.). 'I was told that this river, when it has not rained for a long time, and at the season of the year when the snow on the neighbouring mountains does not melt, is so shallow, that a man on horseback can ride across without any danger at all.'

Between the Zabatas of Major Rennell and that of Mr. Williams, the distance is one hundred and sixty geographical miles in a straight line. By this we see that our author is very much in the rear, and has a fair chance of being lost. But what will be the end of all this? Surely we must soon find some point of difference that will decide the question one way or another. All who have read the Anabasis recollect well that the Greeks, after crossing the Zapatas, still followed the course of the river till they came to a place where they could go no further; before them was a deep unfordable river; and on their right a mighty mountain barrier, through which the river appeared to force its way, absolutely prevented their march along its banks. It is now well known that at this point (about 37° north lat.) the Tigris for miles makes its way through the great Carduchian chain,

leaving on its banks, in many cases, scarcely a narrow foot-passage. Such phenomena on a grand scale are well known to exist in various parts of the old and new world. But Mr. Williams contrives to shut the Greeks in ‘a natural cul de sac,’ formed by the Hamrun hills and the Tigris, about lat.  $35^{\circ}$ ; thus the difference between the position that Major Rennell and Mr. Williams assign to the same point is about one hundred and fifty geographical miles, measured in a straight line along the river. Those who can believe that the Hamrun hills are ‘exceedingly high mountains,’ may also believe that they are the barrier that opposed the retreating Greeks.

The remainder of the route our author acknowledges to be exceedingly difficult to explain, as indeed it really is; but the difficulties are much increased by his new geographical system. We will not undertake to show the reader how Mr. Williams leads the army to Trapezus (lat.  $41^{\circ}$ ) on the Black Sea, with such formidable obstacles to encounter, after having already suffered so much, and having advanced no further than the Hamrun hills (lat.  $35^{\circ}$ ). We request him to read for himself. Two things in this new route require mention: first, our author takes the Greeks east of the Lake Van, while Major Rennell, whom we trust in, because he always gives us good reason, makes them go on the west side. Secondly, the army, it must be recollectcd, came to a river called the Phasis\*, which Major Rennell considers to be a branch of the Araxes, which gives name to the district of Pasen, and is still called Phaz by the people of the country. Mr. Williams would ‘willingly identify it with one of the streams that fall into the Lake Van;’ and further he says, ‘two other streams of the same name, the Colchian river and the Hy-Phasis run like this from the east to west, and perhaps derive their name from *pasi* or *fesa*, the oriental name for the east.’ In what oriental language,—for there are a great many,—does *pasi* signify the east? In none, at least, that are known to oriental scholars. But such vague conjectures as this, wrapped up in a specious dress, form a large part of Mr. Williams’s new geographical system.

The army at last arrives at Trebizond by a miracle, and there we would gladly leave them and the author, if the discussion on the site of Kerasus did not require a short notice.

Xenophon allows only three days march from Trapezus to Kerasus, while, in fact, it is nearer six marches, (being at least sixty geographical miles in a straight line,) provided the modern Kerasunt be the representative of Kerasus. But

\* 1 Anab. iv. 6, 4.

Mr. Williams denies this. The resemblance or identity of the names Kerasus (gen. Kerasuntis), and Kerasunt, is a strong presumption in favour of their being the same place, which is confirmed by the distances given in the *Periplus* of Arrian. But if this is true, Xenophon has made a mistake in the distance between Trapezus and Kerasus. Mr. Williams, to prove that he has not made this mistake, labours to show that Arrian, who says that Pharnaceia 'was of old Kerasus,' only said so to please the people of Pharnaceia and the Emperor Adrian. 'Kerasus,' he adds (from private information, we presume), 'was one of the cities that formed the Pontic Tripolis (the modern Tirabili), and its name was lost.' But it appears again in Ammianus and the *Synecdemus*, as our author admits; yet we are told, this was not the real Kerasus, but the Pharnaceia which Arrian christened by that name. Those who are determined to defend all that Xenophon writes, and all that his text now contains, may adopt the author's solution of the difficulty. Though we believe the modern Cerasunt to represent Xenophon's town, we admit that there is some difficulty in explaining why Ptolemy and Strabo make Pharnaceia and Kerasus two different places. Why Pliny should omit the latter altogether is not so great a difficulty, the geographical matter of this author being, in our opinion, almost as confused and inaccurate as his text now is corrupted and unintelligible.

Mr. Williams's essay contains more extracts from rare, curious, and learned works, than almost any book of the same size which we have met with; and it will therefore be occasionally useful to those who take an interest in Asiatic geography, and are unable to procure many of those scarce travels to which he appears to have had such ready access.

We are told that this work is probably the forerunner of another and larger on the geography of Asia. Should the new undertaking ever be accomplished, we cannot help thinking that the author will find reason to alter many of his opinions, and that the declamatory, and self-satisfied tone\* which prevails in his essays, will be exchanged for a style and manner more suitable to such inquiries.

The two essays are inscribed to the memory of Xenophon the Athenian, and Alexander the Macedonian, whose marches and campaigns have furnished material for the author's investigations. It is a new contrivance in the dedicatory line to misrepresent the most important acts of a man's life, and then place his name at the head of the misstatement.

\* See pp. 12, 32, 186, &c., &c.

## ITALY.

*Italy, by Josiah Conder, author of the Modern Traveller.*  
3 vols.

MR. CONDER has himself stated at the beginning of his work, vol. i. p. 25, his object to be, ‘not so much to take a statistical or scientific survey of Italy, as to supply the tourist with a better itinerary than the common guide-books, and also to furnish the reader who may not be disposed to cross the Alps, with a correct delineation of the characteristic features, the natural curiosities, historic sites and scenes, monuments and living manners of Italy.’ The first part of his promise Mr. Conder has amply fulfilled, and his book is certainly a superior sort of travellers’ companion; but the very arrangement suited to such a purpose is not, in our opinion, the best calculated to give the foreign distant reader an accurate insight into the condition of a country. ‘To a foreign traveller,’ observes Mr. Conder, ‘the territorial divisions of a country are matters of little interest, nor does he concern himself with other boundaries than such as intersect the lines of route.’ And thus, in order to indulge the tourist, the lines of route are followed in the work before us, and we are led on from capital to capital, from church to church, and gallery to gallery, after the usual manner of a guide-book, accompanied certainly by superior discrimination, better taste, and a greater variety of information.

A full and satisfactory description of Italy and its inhabitants remains still a desideratum, such a description as the scholar, the politician, the philosopher, the statesman, might safely consult; such a description as would make us acquainted with the state of society in each Italian state, its government and laws, its resources and industry, the habits and feelings of the different classes of the people, by which we might form a reasonable surmise of their wants, wishes, and future prospects. Unfortunately, the *moral features* of Italy constitute the very part which books of travels are deficient in. Most travellers have drawn caricatures of Italian society and character. They have confounded dates and localities, and given to the present Italians the features of those of half a century or a century past. We will instance a few of these aberrations out of the writers that Mr. Conder has quoted as his authorities. ‘I am told,’ says Simond, ‘there is now about one murder a day committed at Rome! Formerly the average was from five to six each day!—Vol. iii. p. 403. Now this is an exaggera-

tion too gross to stand in need of refutation. How Mr. Simond could believe such a story we are at a loss to conceive. He travelled, we know, very rapidly through Italy, and he seems to have mixed but little with the better informed classes, yet, in a mind naturally shrewd like his, the monstrosity of such an assertion ought to have excited doubt and elicited further investigation before he allowed himself to repeat it in print. The nearest approach to it is found in some history of the pontificate of Pius VI., where it is stated, we do not know on what authority, that, during the *eighteen or nineteen years of that Pope's reign preceding the first French invasion of 1798*, about six thousand murders were committed, *not at Rome, but in the whole Papal states*. Every body knows how much the system of police and the administration of the laws have altered at Rome since those times ; the writer of this has himself lived at Rome for years at different epochs, and never heard of the *daily sacrifice of a human victim* perpetrated in that capital.

On the subject of Naples, p. 425, Burnet is quoted, who says that the Jesuits *were* the proprietors of half Apulia, and were also the great merchants of Naples ; that the Dominicans had four-and-twenty houses of both sexes, the Franciscans nearly as many, besides Benedictines, Olivetans, &c. ; that the plate of the churches was estimated at eight millions of crowns, and that four-fifths of the wealth of the kingdom was the property of the clergy.' Now all this was tolerably correct in Burnet's time, except the last sentence, which is evidently an exaggeration, but it has nothing to do with the state of Naples in the nineteenth century. And yet Mr. Conder concludes the quotation by saying—' How shall such a country be emancipated ? ' as if the number and wealth of convents were, *in our days*, the main obstacles to the regeneration of Naples ! Such is the inference that most readers will draw from this paragraph. They will think that Italy is as much monk-ridden as Spain itself. And yet it is a fact, that most of the convents, especially the wealthy ones, have been long suppressed ; that the plate is gone to the French ; that the few convents remaining have little or no property, and receive a small allowance from government in compensation for their former domains ; that, in short, monkish influence is completely gone at Naples, as well as in most parts of Italy, and that the re-establishment of the Jesuits has been a complete failure. Mr. Conder must have had some suspicions of the fact, for he adds in a note—" Most of these convents, *we presume*, have been suppressed." Why, then, mention the number and wealth of the convents as the

great obstacle to the regeneration of the country ? A little more vigilance and caution might have prevented such incongruities.

While speaking of the Geonese Riviera, vol. i. p. 211, Italian villages are described as follows :—

‘ On entering these picturesque dwellings, windows without glass, rooms without furniture, dirt, poverty, and idleness, every where present the frightful signs of all that is wretched in the condition of the inhabitants. More desolate, forbidding habitations than the generality of those occupied by the Italian villagers, it is not easy to conceive of. They are almost always half in ruins, &c. . . . ’

This description shows again the fallacy of attempting to describe Italian scenes and manners in the lump. No authority is quoted for it, and we must presume that Mr. Conder has gathered it from some tourist’s partial account of some Italian village. It might apply to some parts of the Campagna of Rome, of Calabria, or to some villages in the Apennine chain, but certainly it *does not apply* to the *generality* of Italian villages, and still less to those of the Riviera of Genoa, which is one of the most thriving districts of Italy, and where the inhabitants enjoy, perhaps, most domestic comfort, with the exception of those of Tuscany. But the ideas of comfort are as different with an Englishman and an Italian, as their respective climates. Still there are notions of proper decencies and comforts among Italian villagers ; and their beds, their linen, the women’s wardrobe and trinkets, their kitchen utensils, afford abundant evidence of this to those who, like us who write, have entered their humble dwellings.

Speaking of Genoa, p. 259, we read with astonishment, ‘ that the trade is now chiefly carried on under foreign flags, through dread of the Barbary corsairs !’ This was the case under the old republic, and matters continued as bad under the French conquests through fear, not of the Barbary corsairs, but of the English privateers and men-of-war. But since the peace, and more especially since Lord Exmouth’s expedition against Algiers, in 1816, the Genoese or Sardinian flag is free and respected all over the seas ; Genoese vessels proceed to the Black Sea, to the Levant, to South America, and the East Indies ; and the Sardinian navy, consisting of one ship of the line, several frigates, corvettes, and brigs of war, has been fully able to attest the national independence and protect their trade against the African pirates, as was proved by their attack on Tripoli not many years ago. In fact, this security of their maritime trade is the great, the only compensation for the loss of their independence, which

the Genoese have obtained since their annexation to Piedmont, and their sailors are conscious of it, as we have often heard from them. The Genoese maritime trade, we do not mean that of the city of Genoa alone, but of all the coast, of the towns of San Remo, Alassio, Zingueglia, Settri, Chiavari, &c., has increased amazingly since the peace : hundreds of merchant vessels, some of large size, have been built—so far from the 'Genoese trade being carried on under foreign flags.'

Of the character of the Milanese we have in Mr. Conder's work very extraordinary accounts. A Swiss traveller, Galiffe, quoted at p. 401, vol. i., says :—

' No where have I met with more amiable people than the Milanese. They have all the vivacity of imagination, all the liveliness in their exterior appearance which one *expects to find* in Italians, without the least mixture of that low cunning with which the Italian people are reproached.'

Hear now Mr. Rose, *ibid.* ' As the Milanese, as a man, is cut short of his fair proportions, so I should say he is behind all other Italians in mental qualifications, being generally heavy and slow of understanding.' What is the reader to make of such conflicting statements? He is left without any clue to the real truth of the case. This is the consequence of trusting to the accounts of other writers, each of whom has his prejudices, national, political, religious, and *of custe*. We should say, from what we have seen of the Milanese, that both accounts are incorrect. Travellers are too apt to judge of a people from a few individuals whom they meet in their way. The Milanese are a good-natured, sociable race—they can hardly be called, however, the *most amiable* people in Europe. They themselves would modestly refuse Mr. Galiffe's compliments as to their *vivacity* and *liveliness*; in fact, these qualities do not make part of their character, as they do essentially of those of the Venetians and Neapolitans. But neither can we subscribe to Mr. Rose's sweeping sentence of their being *behind all* other Italians in mental qualifications. They are slower, but their judgment is perhaps surer and safer than that of the South Italians. With regard to their personal appearance, although there are certainly many cases of deformity, we should say, that, taking both sexes together, there is as great a proportion of beauty at Milan as in any other great Italian city. Men are handsomer at Naples, and perhaps at Turin—women at Rome and Genoa. The Italian army under Napoleon was remarkable for the good appearance of the men, and it was only composed of Lombards and Venetians.

One observation may serve to explain some of the inac-



Having stated so much as to what a work ‘on Italy’ should be, we shall now briefly follow Mr. Conder through his entertaining itinerary. After a general account of Italy and its subdivisions, we have a good description of Savoy, which occupies one hundred and thirty pages, rather too great a proportion for a *transalpine* province annexed to Italy. We get next over Mont Cenis to Turin, to which fine city, too much neglected by travellers, justice is done. Then follows an interesting description of the Vaudois, or Valdenses, from the works of Gillies, Acland, &c.; we then proceed to Nice, and, lastly, to Genoa. Of the latter it might have been observed, that they are the only people in Italy who still retain a strong republican feeling. The author then retrogrades in order to lead his readers over the other great passage by the Simplon, which with the other Alpine passes of the Splügen, Bernardine, St. Gothard, and Mount Bernard, are remarkably well described from Brockedon’s excellent illustrations. At last, by Como, we are led to Milan, with which city the first volume concludes.

Vol. II. takes us to Pavia, Lodi, Piacenza, and Parma. A mistake occurs concerning the history of the last dukedom, which it is said was given up to the Emperor of Germany in the last century, while, in fact, a branch of the Spanish Bourbons held possession of it until the French invasion, and even afterwards, until the last Duke, Don Ludovico, exchanged it for the kingdom of Etruria, from which he was afterwards driven by Buonaparte. Don Ludovico’s son is the present Duke of Lucca. We have also an account of the ruins of Velleja, a Roman colony which was buried by the fall of a mountain, and which has been little noticed by travellers. We next pass to the diminutive duchy of Modena: these small inland states are the dullest and most miserable of Italy. From thence to Mantua, Verona, Padua, and lastly Venice. Here we fall in with an old pleasant acquaintance, Mr. Rose, who, in his ‘Letters from the North of Italy,’ has given the best account of this part of the country. The idea of Venice, even were she again independent, ‘recovering now the sovereignty of the Adriatic,’ p. 240, appears to us one of those dreams in which foreigners, little acquainted with local circumstances, are apt to indulge. Next we proceed through Ferrara and Bologna, to refined and polished Florence, of which, as well as of Pisa, Leghorn, and Siena, we have a good account. The Florentines are called ‘the Greeks of Italy,’ while there is a much stronger dash of Greek character in the Neapolitans and Sicilians.

Vol. III. is occupied chiefly by Rome, and this is, perhaps,

the best part of the whole work. Mr. Conder has consulted Burton, as well as Miss Waldie's 'Rome in the Nineteenth Century.' Both the ancient and the modern cities are elaborately and graphically delineated. It is to be regretted, however, that too much trust is reposed in the superficial accounts of, and spleenetic tirades against, the moral qualities of the people, in which Forsyth, Matthews, Galiffe, Simond, and the author of *Anastasius* have too freely indulged. There are good qualities in the modern Romans, for which they get no credit. With regard to the extensive and important kingdom of Naples, we have only a few hurried pages on the capital, which are the most superficial part of the work. Mr. Conder, however, observes in his preface that he left Naples altogether out of the plan of his work. Should he attempt a description of that fine kingdom, including Sicily, we trust he will consult impartial authorities, native as well as foreign. Materials are not wanting, but they lie scattered about. The large island of Sardinia is also neglected, although we have had lately no less than three elaborate works upon it, Manno, *Della Marmora*, and Minnaud, to which we may add Captain Smyth's.

We might have wished for some more information on the various codes of laws which are in force in the different states, as well as on the practice of the courts, matters of the greatest influence on the state of society. The Austrian code in Lombardy, that of Leopold in Tuscany, the *Codice Sardo* in the Sardinian states, the French code, with few modifications, at Naples, all these differ in their spirit and in their provisions, and would seem to require some analysis and comment.

A good topographic description of Italy, of its mountains, lakes, and rivers, its natural productions, and its geological phenomena, might form of itself a very interesting work. The long chain of the Apennines and its numerous ramifications afford ample matter for investigation. Portions of them have been accurately described by native naturalists, such as Brocchi, Targioni, Galanti, Tenore, &c.

The commerce of Italy also deserves more details, which can only be derived from information collected on the spot. Italy even now imports, we believe, nearly four millions sterling of English goods annually, although the kingdom of Lombardy is closed against English manufactures.

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## SCHOOL-BOOKS OF GEOGRAPHY.

GEOGRAPHY is so universally acknowledged to hold a conspicuous station in general education, that it becomes both an interesting and necessary duty to inquire into the method of instruction generally pursued in this department of knowledge, and to consider the value of the books most generally used to assist learners in its attainment. With respect to the method of instruction, we believe that it is often varied to a certain extent, according to the judgment or discretion of the teacher, even though the same text-book may be used; and it is therefore better to discuss the books in most general use, than to hazard any vague remarks on modes of tuition. One thing, however, may be laid down as tolerably certain, that in this, no less than almost every other department of the school routine, it too often happens that children are made to learn by rote page after page of some text-book of geography\*, and condemned to burden their memory with facts, or rather formulæ of words, denoting facts, which they cannot understand. No explanation is given by the teacher, or required from the pupil,—and the spirit of inquiry is often not only not encouraged, but positively checked. It would not be possible to devise means more successful for damping the ardour of an inquiring mind; and no more effectual obstacle could possibly be thrown in the way of acquiring any practical information. So long as the first steps to knowledge are revolting, and calculated to excite disgust, no reasonable advance will be made; but let the most pleasing means be adopted, let interest be excited, the spirit of inquiry encouraged, and the result will be the rapid developement of ideas, the acquirement of real and useful knowledge. A word or two on the use of maps. It may justly be questioned whether in many cases these are ever consulted at all: certainly they are not considered in their true light, when regarded as aids only to the books. Maps are to large districts what surveys and landscapes are to those less extended. They are the representatives of the real things, and as such they are the indispensable *text-books* which should never be out of the sight of the student. So far from being looked on as aids to books, the books should be considered as explanatory of them. To learn by heart a book of geography, without having an accurate knowledge of the maps, is not a whit more sensible than learning by heart the catalogue of

\* This is the method recommended in the preface to Goldsmith's Geography.

an exhibition of pictures without ever having gone to see them. STUDY THE MAPS is a rule of the very highest value in teaching geography; and as it is observed or neglected, so will the learner's progress be quicker or more slow.

With reference to the books in use as manuals in teaching, it would be both unprofitable and uninteresting to go through a catalogue even of the principal. Goldsmith's, Keith's, Ewing's, and Butler's are, perhaps, those most known. We select the first of these for some observations; and we may add, that many of the general remarks which we shall have to make on it, apply more or less to the others that have been named with it.

*Goldsmith's\* Grammar of Geography*—Longman.

This is the most widely circulated manual of geography in this country. We believe that it is not going beyond the mark to say, that above three thousand copies of this book make their way every year into the hands of youth. A book so extensively used must have a powerful influence, and that influence should be beneficial. Such a work should not only be superior to most others of a similar nature, but should also possess a high degree of real value, and be recognized as an efficient aid in the communication of sound knowledge. Correct description of facts—plainness and perspicuity of language—the judicious selection and arrangement of interesting matter, and, in addition to all this, some sensible hints for its use, are qualities which the thinking public must reasonably expect in a book worthy of the first station as a class-book of geography. The book now under examination falls very far short of being such a one as we could wish it to be. It is indeed so far from being a desirable book to be placed in the hands of children, that we feel convinced that little but mischief can result from its use. It is open to great and serious objections, and these may be urged both on general grounds and on account of the particular errors which are found in it from one end to the other.

The first serious objection that we shall make to it is, the brief, imperfect, and mangled way in which geographical facts are stated throughout the volume. Instance, p. 15, § 18, 19, 20.

' 18. Europe has four inland seas, called the Mediterranean, the Baltic, the Black Sea, and the White Sea. The part of the Mediterranean which lies *east* of Candia, is called the *Levant*; and that on the *north* of the same island, the *Archipelago*.

\* Is the Rev. G. Goldsmith a real person, or is he one of the family of Blair, Adams, &c. who have given existence and names to so many books?

‘ 19. The principal European islands are, Great Britain and Ireland, Iceland, Candia, Sicily, Sardinia, and Corsica, with the Balearic isles, which include Majorca, Minorca, and Iviqa, the Ionian islands, and the numerous small Greek islands in the Archipelago.

‘ 20. The principal rivers in Europe are the Volga, the Don, the Danube, the Dnieper, the Rhine, the Elbe, the Loire, the Tagus, and the Thames.’

How vague and unsatisfactory are such notices! Let us suppose the case of a traveller going through an unknown country. He arrives at a river, and easily learns its name from the inhabitants, but this, if he be a man of any inquiry, will not satisfy him. His notion of it is yet imperfect, and he cannot make his chart of it either mentally or on paper, till he knows its general direction, the country in which it rises, those through which it flows, the sea into which it empties itself; and he will not consider himself acquainted with the subject till he has informed himself on these points. The case of the pupil is quite analogous—the sensible teacher indeed will ever regard him as a tarry-at-home traveller—the materials of his mental map must be fully provided, and correctly too, or else nothing has been done. But in the book now in our hands every river is a Niger, or rather what the Niger was in years past—every range of mountains like the unknown Mountain of the Moon, every country like the ultra Scythian regions of Herodotus, unknown and fitted only for the dominion of fable. What does it profit the child to know that there is a Danube, if he does not know where it is—its direction, the countries which it flows through, the towns on its banks, &c.?—and what will it avail him to know that there is a something in Europe called Prussia, Switzerland, &c. if he does not know that they are states in certain situations, having different relations as to magnitude and position with respect to certain other states, and connected with them by certain political and commercial bonds of union? Such vague descriptions can be of no substantial service. It is the *clear* statement of *definite* facts only that can form a solid foundation for future geographical inquiries. The rationale of the science, which consists in the consideration of every geographical fact in reference to man as a moral and political being, must be based on *truth*. The elementary facts are indeed the skeleton of the science, the frame-work on which we must build and perfect our knowledge. Goldsmith’s Grammar we consider not at all adapted to form a ground-work of this description.

Objections may be made, secondly, to the general want of a systematic arrangement in his book—an objection which of

itself is sufficient to condemn it. There is a total want of unity in the plan. Similar facts are stated in different order in different parts of the book, and in some cases useful facts are omitted altogether, to make room, it would appear, for less important matter. The most incongruous statements are heaped together with scarcely any regard for classification, while other facts naturally connected are given piecemeal in such a way as to be of no service to the learner. It will be well to give an instance of each of these defects. Of China it is said,—

‘China is celebrated for the great antiquity of its government, for an immense population, for the variety of its manufactures and peculiar productions, for the excellency of its inland navigation, and for its reserve and jealous policy towards other nations.’

Similar notices abound in different parts of the book. Can such vague and general statements be in the least degree serviceable to any one that is not, in some degree at least, acquainted with the facts on which they are founded? and so strung together, can they be applied to any practical purpose, when, with difficulty, they have been stored in the memory? As an instance of the last fault mentioned, viz. the piece-meal communication of knowledge, we may instance the Rhine. This unfortunate river is cut up into four or five different pieces. A slice is given to Switzerland, another to Germany, a third to France, and a fourth to Holland; but this is all in separate parts of the book, and not a word is said of its being one of the finest rivers in Europe, having a general north-western course of nearly eight hundred miles, rising on the northern declivity of the Alps, running through part of Switzerland, and, after passing the towns of Basle, Manheim, Cologne, &c., falling by several channels into the German Ocean. This river is only an instance of the defect here lamented. Similar, or slightly different examples might be multiplied.

A word more on the general defect in arrangement. Too much importance cannot be attached to a clear distinction between the natural features and divisions of the world, and those which are formed merely to suit man’s convenience. The former are permanent, the latter are factitious and varying as the fortunes of their inhabitants; and the former are consequently those upon which the latter must be based, and by which they must be regulated. Let the reader of these observations take up Goldsmith’s Grammar, and examine the whole or any part, and he will find no attention whatever paid to this fact. Mixed as the *loose* and inaccurate descriptions, or rather vocabularies of physical detail are

with notices of local and political matter, they mutually clog one another, and the learner is not only left without any real knowledge, but, from the quantity of confused and erroneous notions that are floating on his brain, his road is impeded towards the future attainment of knowledge from other sources.

It will be well to show that the book, besides its general defects, contains particular errors, which make it an unsafe guide for the student. A few only will be mentioned, sufficient to substantiate the assertion just made.

Page 9. 'Venus, as seen through a telescope, is like the new or half moon.' The truth is that both Mercury and Venus, as well as the other planets, in general present to us only a part of their illumined discs, and therefore exhibit phenomena similar to those of the Moon,—being sometimes *full*, sometimes *horned*, and sometimes *gibbous*. We may remark here, that all the statistics of the solar system in this page are very incorrect, as may be seen by comparing them with those in Mr. Barlow's paper in the *Encyclopædia Metropolitana, Astronomy*. If numbers are to be drilled into the learner's head, they should at least be correct.

Page 16. 'Norway is the most mountainous country in the world:' with the exception, perhaps, of Nepaul, Colombia, and Switzerland. That it is the most craggy and uneven country with which we are acquainted, is probably true, but this is not what would be understood or what is meant. But in p. 85, 'of general facts worthy of being remembered,' it is not included among 'the most mountainous countries in the world.'

Page 18. The extent of Norway is said to be 145,000 square miles,—read 118,500. Population stated at 910,000 —read 1,100,000 in 1826. Sweden—Extent, 195,000; read, 169,000. Population, 2,615,000; read, 2,800,000. The accounts from which the corrective numbers are taken are official.

Page 22. 'The Vistula is in Poland.' Here is an instance of the loose way in which facts are stated in this book. The Vistula, at least the greatest part of it, *was* once in Poland, but not since the time of the partition. It runs through Poland; but it neither rises in it, nor is it in Poland when it falls into the Baltic Sea. About two-thirds of its course only are in that country as at present constituted.

Page 27. Population of Bavaria 5,000,000. The official returns for 1827 give it under 4,000,000.

Page 30. 'The once famous Delphos is now in ruins.' Delphi (properly the name of the people) is the usual and

correct name for that place. Does the learner know *why* it was once famous? If he does not, the remark is quite useless.

Page 51. Among the provinces of Asiatic Turkey is mentioned 'Diarbekir or Al-Jezira.' These two names belong not to the same but to different provinces, the one being N.N.W. of the other.

'On the banks of the Tigris lie the extensive ruins of ancient Babylon.' The map of Asia attached to the book will enable the pupil himself to correct this error. In that we find Hillah, the site of Babylon, correctly laid down—not on the Tigris, as Bagdad is, but on the Euphrates, nearly due south of Bagdad—which is right. From what is said of these rivers in this page, any one would suppose that they were separate rivers, quite distinct, while, in reality, they unite and run in the same channel for more than ninety miles.

Page 63. 'In the Persian Gulf are the islands of Ormuz and Gombroon.' It would seem as if Gombroon were called an island, while it is, in fact, a town on the main land opposite to Ormuz.

Page 70. 'The principal rivers of North America are the Missouri, the Mississippi, the Ohio,' (all of which are distinct, it would seem from the book,) 'the Hudson, *the Chesapeak*, the Delaware, and the St. Lawrence.' The same sentence recurs at page 72. There is a *Chesapeak bay*, which receives the rivers Potowmak, Susquehanna, and others, but no river of that name.

Page 71. We learn that 'the United States of North America promise to become, on the abolition of slavery, which they now tolerate, the most powerful and happy community in the world.' Instead of this very inaccurate remark, insert the following:—'Slavery does not exist in any of the Northern States (see 210), and only in one or two of those which Mr. Goldsmith (see 211) calls the Middle States.'

Page 85. Among 'general facts worthy of being remembered,' it is said here that 'Persia is one of the most level countries in the world.' This assertion requires considerable modification; but we acknowledge that it is partly corrected at page 63, where we are told, 'the singular features of Persia are *mountains* and deserts.' If we were to proceed to mention the omissions of important facts, and give instances of slovenly and obscure language, this review might be much extended. Enough, however, has been said to show that Goldsmith's Grammar is not a good text-book of geography;

and it is hoped that these remarks may induce teachers and others to examine it more minutely than probably they have done.

At the end of the volume there are about forty pages devoted to Physical Geography, which certainly contain some useful information; but the matter has not always been drawn from the best sources. For example, page 94:—  
‘ Except the Caspian Sea, whose waters are a little brackish, the waters of all lakes and rivers are mild, sweet, and fit for human purposes.’ What would the Rev. J. Goldsmith say if he had a mouthful of water from the Dead Sea, or if he were to make a pilgrimage through Persia and central Asia, under a vow to taste all the lakes and rivers that he met with on his journey? Again, page 98, in the section ‘ on the differences of languages and nations,’ it is said, that ‘ people who speak the same language, or a dialect of the same language, belong to the same nation.’ According to this principle, the negro, when a native of a country where English is spoken, is an Englishman; and, as the ‘ Germans, Dutch, Danes, and Swedes are one nation, speaking all dialects of the same language,’ it follows that our English negro is also a German, Dutchman, Dane, and Swede. This, we believe, is not the author’s meaning; but the fault lies in the inaccurate way in which his principle of distinction of nations is laid down.

Some exercises follow upon the use of the globes. We may observe that the globe when properly employed is a very useful instrument: but the solution of problems according to rules not explained, can be of little service. The use of the globes, as taught in this book, is merely a mechanical contrivance, and can lead to no sound knowledge. A few questions on geography, with a table of latitudes and longitudes of remarkable places, (a very useful idea, which ought to be carried still further,) and a vocabulary of proper names, close the volume. There are seven maps in the book; without venturing any opinion on their intrinsic value, it is not too much to say that they are sufficiently good to accompany Goldsmith’s Grammar.

The same general defects which characterise Goldsmith’s Grammar will be found, more or less, in nearly all the school manuals used in this country. A little volume, however, has lately made its appearance, which may be regarded as an exception. To this it is our purpose to direct the reader’s attention.

*Woodbridge’s Rudiments of Geography*—Whittaker.

This is an unacknowledged reprint of a book published in

the United States a few years ago, drawn up by Mr. Woodbridge, the present editor of the American Journal of Education. As it is peculiar in its plan, it becomes necessary to furnish some explanation of it for the benefit of those who have not seen it. The author has well considered the question,—‘How shall I best instruct a *child* in geography?’ He has seen the confusion that reigns throughout the previously existing books of this nature, and has attempted—it will be thought, perhaps, with considerable success—to introduce something like order into the universal *chaos* of things. He has the merit of being the first to introduce the principles of *comparison*, *classification*, and *generalization*, hitherto quite forgotten, into this department of elementary knowledge.

The work may be considered as divided into three parts. In the first, taking it for granted that the student, in whose hands the book is placed for the first time, is quite unacquainted with what he is about to learn, Mr. Woodbridge contents himself with laying down, in a plain and familiar way, a few broad and leading truths of a nature easy to be understood, and such as are best calculated to prepare the way for more solid attainments at a subsequent period. Thus a very few general statements are made on the nature of the world, and its relation to the other parts of the solar system; the use of maps is familiarly explained, the leading natural divisions of the earth given, and other information communicated likely to familiarize the learner with the nomenclature of the science. Some general statements follow of the leading facts, first of physical, and then of political geography, to be substantiated by the maps and charts which accompany the volume. It will be seen that some care has been taken to introduce only such matter as a child can understand, either by himself, or with very slight aid \* from the instructor.

The second division of the book carries the student, who is now pretty well acquainted with the earth’s general features, through its different countries successively, and informs him of facts respecting them as particular districts, or impresses more deeply on his memory the truth of the general statements, by referring him to particular facts for their verification. Each section concludes with a number of questions which can only be answered by the study of maps; and at the end of this description of each portion of the world,

\* We speak here not of that aid which a lazy teacher can give by *telling* the *passive* listener; but of that assistance, the only one of any value, which leads the child, step by step, to find out for himself the information that he requires. Knowledge so obtained cannot easily be forgotten.

travels on the maps are suggested, and routes laid down, in order that, by this exercise, the pupil may gain correct notions of the relative bearings and distances of places; and an opportunity is given at the same time for repetition, without disgust, of much matter previously learnt. This plan argues much in favour of the author's good sense: his preface, indeed, shows that he has correct views respecting the real nature and proper use of these pictorial descriptions. We trust that every one who uses the book will follow the directions which are laid down on this head.

Part the third contains such general views of the regions, climates, animals, vegetables, and minerals of the earth, and of the arts, commerce, literature, and customs of its inhabitants, as could not have been understood without the accurate knowledge communicated by the preceding exercises. Some classified tables on the height of mountains, length of rivers, extent and population of countries, and revenue of states, are prefixed for occasional consultation.

We will now briefly inquire what is the value of the book, and how far it can be made available for the purposes of education. We have much satisfaction in being able to say, that there is no fault in it which *radically* affects its character. From the description that has been given of its contents, it will be seen that it is constructed on certain principles, in compliance with a plan sufficiently well adapted to convey knowledge easily and gradually to a juvenile student.

The division of the matter is well conceived, and it has evidently been formed on experience, and with a view to practice. General notions on any subject must be formed, before particular knowledge can be attained, in the same way as the outlines of a picture must be laid down before the shades and colouring can be introduced. This has been done, and, on the whole, well done. At the same time, however, that this praise is given to it, as due to its general merits, it must be observed that there are considerable defects in the different parts of the work, which should be corrected before it can be placed with unreserved confidence in the pupil's hands. We shall particularize a few in the first part, and content ourselves with making some general observations on the deficiencies of the other two.

#### 1. *Hypothetical Statements.*

Page 4.—Of comets ‘only a few have been known to return, and at intervals of 75, 100, or 200 years.’ We think that Encke’s comet rather disproves one part of this assertion. But this is not the only instance where hypothesis is introduced. Positive facts, not conjectures, are what the

beginner should have presented to him. The latter are dangerous to all but advanced students.

**2. Vague generalities open to frequent exceptions :**

Page 9.—‘ Countries usually contain men of one nation, speaking the same language—Switzerland, Asiatic Russia, Turkey, Hindooostan, and many other regions are exceptions.’ Such assertions are of little value, and only calculated to mislead a beginner. So again in p. 15. ‘ Deserts are immense tracts of land, usually level, on which scarcely any water is found.’ The desert of Zahara is level, low, and without water; but those of Persia, Arabia, Asia minor and central Asia are both high, and traversed by chains of hills. The deserts of Asia abound with salt lakes and salt streams. Such frequent exceptions so much invalidate the assertions, that they are calculated rather to injure than instruct.

**3. General statements made without clear explanation.**

Page 11.—‘ Oceans are always nearly of the same temperature.’ The temperature of water is not, it is true, so variable as that of the air, but the difference is still very considerable. Take, for instance, that of the Gulf-stream, in lat. 22°, nearly 80° of Fahrenheit, and compare with it that of the Atlantic in lat. 60° or 70°. Seasons, likewise, and the depth, materially affect their temperature.

Page 17.—‘ Mountains serve to moderate the heat.’ The reason of this should have been explained.

**4. Incorrect Statements.**

Page 9.—‘ The islands of the Pacific Ocean are divided into *Australia* and *Polynesia*.’ Australia is only one island, sometimes wrongly called New Holland. Australasia is meant, which comprehends New Holland as well as the larger islands in its vicinity, New Guinea, New Zealand, Van Diemen’s Land, &c. The error is repeated in the following page. Page 9.—‘ Behring’s Strait, about forty-eight miles in width.’ Read thirty-six.

Page 14.—‘ A high cape is called a promontory.’ Shakespeare indeed speaks of the blue promontory nodding to the world; but geographers are pretty generally agreed in considering a cape to be the extreme point or termination of a promontory.

So it is correct to say, ‘ Cape Comorin is the extremity of the southern point of India.’

Page 17. ‘ Length of the American chain, 11,500,’ more correctly 9000.

Page 21. ‘ The cataracts of the Nile in Nubia are very grand.’ This is a common notion, but very incorrect. The cataracts (those of Essouan, Wady Halfa, &c.) are, in fact,

no cataracts at all, but little more than rapid currents running through a channel obstructed with rocks. The most authentic drawings which represent them give no idea of grandeur to these falls.—See Denon, Plates, No. 69.

Page 28. ‘Within the polar circles the nights of winter are from twenty-four hours to six months in length.’ This is quite unintelligible, and, as it stands at present, certainly most incorrect. We shall not venture to propose any amendment.

Page 41. ‘A republic is that government in which the people choose their rulers, as Switzerland.’ Besides the vagueness and looseness of the definition, the illustration is incorrect. The general tone of the Swiss government is decidedly *oligarchical*. Certain families enjoy elective and legislative privileges to the exclusion of the people at large. America, Mr. Woodbridge’s own country, would be a proper example.

The chief objections to the second part of the work arise from that unsatisfactory looseness which attends all brief and sweeping assertions. We are certain that they are of very little value, in as much as they communicate no real information. There is also a want, in some parts, of that systematic arrangement which is necessary to aid the memory in the retaining such details. The sections on the cities of Asia are open to condemnation on his own allowance; for ‘they are arranged in a manner that seems only adapted to a Gazetteer, or a book of reference.’—(See Preface). In both the second and third parts may be discerned, even by the casual observer, a considerable number of inaccuracies, and further observations would, no doubt, swell the catalogue. It is to be lamented that the notices on commerce are so little satisfactory from the vague and general way in which they are expressed. Some persons will consider the entire omission of the *historical* part of geography a striking defect in the book. It might easily be inserted in its proper place without confusing the remainder, or overloading the matter of instruction.

The *Atlas*, or book of maps and charts, which accompanies Woodbridge’s Rudiments, presents features somewhat different from the common school maps. It has been made for the book under the author’s own directions. It contains eight maps, and, in addition to them, two charts, one exhibiting the prevailing religions, governments, civilization, and population of the different countries of the world respectively; the other an *isothermal* chart, giving a comprehensive view of the climates and productions of different parts of the world. The

maps have *symbolical* marks placed in different parts of them denoting the size, importance, population, and other relations of the various places contained in them and mentioned in the Rudiments. The benefit resulting from the use of such artificial aids to memory is, we think, highly problematical. Perhaps a philosophical distribution of the different facts, so stated on the maps, through the different parts of the Rudiments would be, on the whole, an improvement. If, however, the teacher always makes a point of drawing from his pupils the information symbolically given in the maps, either orally or in writing, every good end will be answered. Respecting the correctness of the charts in all their detail, it would be wrong to hazard an opinion without much more knowledge and research than we are able to bring to the inquiry. As far as we are competent to judge, they are sufficiently correct for the general purposes of school learners.

Some pains have been taken to ascertain the value of these maps in point of correctness of outline, and of the situation of places. But as to the limited utility of maps on so small a scale there cannot be two opinions. Maps, to be useful in school-teaching, must be large, not for the purpose of containing a vast multitude of names, but in order that the outlines may be truly defined, and something like an approximation made to reality in laying down the few geographical positions that are necessary for teaching ; and, above all things, that as fair a representation as possible may be given of the physical features of countries. The German large maps, called Wandcharten, are found very useful for this purpose.

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#### A SYSTEM OF POPULAR GEOMETRY.

*A System of Popular Geometry, &c.* by George Darley, A. B.  
Third Edition. John Taylor, London.

We have elsewhere stated that it is the plan of this journal to notice generally works which have obtained circulation, whether good or bad, and also to endeavour to draw good works from the obscurity in which they are often left during the first years of their existence, leaving that which is both bad and unknown to its fate. On two of these grounds the work now before us has claimed our attention, for it has reached its third edition, and has merit enough to induce us not to regret its success. We cannot, however, agree

with the author, who seems to think that his work is a mighty engine, silently but powerfully fostering a mathematical spirit in the country. His preface shall speak for itself; and though we can hardly believe he wishes to be understood quite literally, yet his pretensions are, in any case, somewhat startling. He commences his preface to the second edition as follows:

'It is far more creditable to the public than to us that a second edition of our Geometry has been so soon called for. Encouragement given to those who labour in facilitating the road to knowledge is but an involuntary effect of proportional ardour in those who pursue it. To disseminate the principles of mathematical reasoning, or rather a taste for mathematical reasoning, among the several classes of society, was the object of our publication; and this object appears to have been fully attained.'

Again, in the preface, Mr. Darley observes of his own work:

'Thus are all the useful principles and propositions of Euclid collected in a small, unexpensive volume, the obscure departments of the science made intelligible to common understanding, and the Elements of Geometry so arranged as to unite systematic regularity with rigorous exactness of demonstration.'

This coming from the author himself would be rather strong, even in a fiftieth edition. It must have been meant, we presume, to save trouble to reviewers, by enabling them to make the proper article with paste and scissors. We agree, however, with the author to a certain extent; and if he will only admit the faults which we think we can point out, to the same extent, it is very likely our notice of his next edition will show that we have amended our bill. We proceed to the merits and demerits of the work.

Saving and excepting certain points hereafter to be mentioned, we think this work the best calculated to give children the first notions of geometrical reasoning of any with which we are acquainted. The style is for the most part clear, the propositions well chosen, and much difficulty is saved by the introduction of definitions and axioms in their proper places, instead of lumping them at the beginning as in Euclid. The book itself, a good-looking duodecimo, is not near so frightful as the larger octavo in which Euclid is usually dressed; and while we admit its merits, we are inclined to think that to this its sale is due in a great measure, since the 'discerning public' sees better with the eyes of sense than with those of reason, and, as publishers know, finds merit in a gay cotton binding, which it does not observe in plain blue paper. We feel assured that

this is the work which parents would, in any case, like to put into the hands of their children, from its appearance alone ; and we are happy to think that, judging as they do, they have not come worse off.

We must here observe the great improvement exhibited in the statement of the indirect demonstrations, or *reductiones ad absurdum*, in which the consequences of the false supposition are not, as is usual, positively asserted as springing from a legitimate hypothesis, but are preserved in their dependence upon their original, by the use of the conditional mood and the hypothetical syllogism. This removes what is generally found to be a serious difficulty with beginners, who are required, in the very outset of their career, in direct contradiction to their senses, which declare the thing assumed to be impossible, to take up, in the form of a positive assumption, an hypothesis inconsistent with one already made. It is concealed from them that similar arguments are frequently made use of in other subjects, by the new and uncouth form in which the consequences of the assertion upon trial are stated. We may explain this to the unmathematical reader in the following way : the argument employed in the *reductio ad absurdum* is of this nature: ‘ If A were equal to B, C would be equal to D ; but C is not equal to D, therefore A is not equal to B.’ This is the ordinary form of language, and is perfectly conclusive, if the premises be correct. It would be thus stated in Simson’s Euclid : ‘ C not being equal to D, it is asserted that A is not equal to B. For, if possible, let A be equal to B, then C must be equal to D; but (hyp.) C is not equal to D, therefore C is, at the same time, equal to D, and unequal to it, which is impossible, therefore A is not equal to B.’ To all but the mathematician the first of these two will be the more simple.

It is sadly to the disadvantage of every elementary work, as far as reviews of it are concerned, that its merits must be general, and must consist in the actual execution of its parts, so that to show them clearly it is necessary to quote the whole book, while, in a poem, a play, a novel, or a history, a few passages of quotation may render all praise unnecessary. Its defects, on the contrary, have more individuality, and may be shown up in a more striking manner. It is thus that many notices, highly favourable to works of this species, appear to consist of nothing more than a record of their faults ; and it would seem as if the words of praise thrown in at the beginning and end, were merely the sugar and milk to a decoction of sloe-leaves. We warn our readers not to judge

our opinions by the comparative quantity of type expended in praise and blame. The balance is much in favour of our author; but, on the other hand, we would not have it supposed that we really consider the following matters as trivial. We have great defects to produce, some of which have almost staggered us in this opinion of the work before us. We proceed to the true office of a critic, as settled by the highest authorities; *viz.* the finding of faults.

Our first complaint is, that the author makes a great point of continually telling the little children for whom he writes—how much better his various articles are done than the corresponding ones in Euclid. Now this is a most erroneous impression; and, were it ever so true, would matter nothing to those for whom this work is intended. It might do very well for Simson, who translated Euclid, to remark the defects of the original and to vindicate the alterations which he introduced; but well as the Greek geometer deserves such a compliment, it is now superfluous in an elementary writer to inform his reader in what points he chooses to vary. We will, however, take an instance or two.

Mr. Darley objects to the difficulty of the ‘*Pons Asinorum*,’ and supplies its place with a demonstration in which there is a ‘*fallacia suppositionis*,’ allowable enough, it may be, if the law of continuity is assumed. That which is proved of two distinct triangles is all at once made to hold good, when those two triangles have, by the alteration of their parts, become one and the same triangle. The general demonstration could never have been applied to the particular case in which alone it is used, without making the question much harder to a beginner than even the proposition of Euclid. If an isosceles triangle were supposed to turn round its axis through half a revolution, and in this state were considered as another triangle, the application of Euclid’s fourth proposition would give the demonstration, here concealed under a generalization which we look upon as inferior to that of Euclid, for the beginner at least. It is but fair, however, to add, that Mr. Darley has given Euclid’s demonstration in his notes.

Again, instead of defining an angle as the inclination of two straight lines which, if it be wholly unmeaning, is, by this very defect, prevented from causing any confusion, Mr. Darley observes—‘ By an angle, in fact, is meant the *degree of increasing width, a separation* between the lines which form it; this depends not upon the *length*, but upon the *direction* of the lines.’ The italic words are so in the original, and, being thus made prominent, we will observe, that the

only clear idea is that of *length*, which an angle is not, while there is sad confusion between the *increasing width*, *separation*, and *direction* which it is, or depends upon. It would have made the matter much more clear, to have said, the angle made by two lines is the opening which they make, and then to have defined equal angles, &c.

Mr. Darley complains of Euclid's definition of a tangent to a circle as 'vague and unsatisfactory.' We give Euclid's definition, followed by that of our author:—

'A straight line is said to touch a circle, which meeting the circle, and being produced, does not cut the circle.'

'A right line which, however produced, meets a circle in but one point, is called a tangent to that circle.'

If Euclid be taken literally, these are precisely the same, since a circle is a *figure*, not a *line*; and to cut a figure, is to divide it into parts. Even if, by circle, be understood the circumference only, the distinction appears to us to mean nothing.

We should recommend the author, in his next edition, to throw aside the inconvenient practice of adding an abundance of notes in small print to each section of his work. If an article be really wanted by the beginner, why not put it into the text; if not, why put it in at all, in a work designed for beginners only? Notes are sore temptations to controversy; if a book be entitled 'Notes,' these are sure to be *critical* and explanatory; and Sir Walter Scott tells us of a poem which was projected purely that Ossian, Macpherson, and Maccribb might be demolished in the notes. To supply the place of the notes in this volume, we beg to suggest that the lines of the text might be widened, so as to allow of larger capitals for the letters denoting lines and angles. This would add more clearness to the work than a volume of small printed notes, even though they demolished Euclid from one end to the other.

But we leave all comparatively minor faults, to proceed to the great blemish of this work; and a sad blemish it is. There are no terms in gentlemanly criticism too strong to express our dislike of the very ungeometrical theory of parallels which the author has substituted for the method of Euclid. And here we find a singular assertion in the preface:—

'So long as Euclid's doctrine of parallels forms, at least in its present state, the groundwork of the science, geometry can never be made a popular study. When such a monstrous assumption as the twelfth axiom continues to stand in the very threshold of elementary mathematics, it will for ever repel common understandings, and for

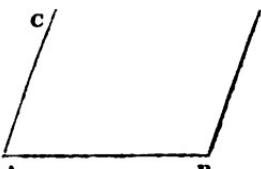
ever confine the study to those who have genius or perseverance much greater than ordinary.'

What do the beginners who open Euclid care whether any point be demonstrated or not, provided it be clear? They almost universally err in not demanding enough of demonstration, and it is the method of demonstration itself, and not the defects of it, which have hitherto prevented geometry from becoming a popular study. Does the author mean to assert, that the world in general have a taste for reasoning so well cultivated, and a power of judging so mature, that all, even children, turn with disgust from any assumption which is unaccompanied by demonstration? If this were so, then geometry, which is not a popular study, ought not to become such, for its principal occupation would be gone, and the great advantages, which it is asserted to possess as a branch of education, would have no existence. It is what is called the dryness of the study which prevents its universal cultivation, and this supposed defect would be altogether remedied, not by adding more demonstration, but by leaving out demonstration altogether, and exhibiting the mere facts in a striking form. But let us consider a little what is this tremendous assumption of Euclid, which so many have tried to dispense with, and in which just as many have confessedly failed.

Every proposition in geometry is ultimately the result of some assumption, which ought to be perfectly self-evident. One of these, of which it has never been asserted that a demonstration is possible, is that 'two straight lines cannot inclose a space.' This, the tenth axiom of Euclid, is the only axiom (with the exception of our bone of contention) which is purely geometrical, for the first seven and the ninth are arithmetical; the eighth is a mere definition of the word equality, and the eleventh is a theorem, capable of demonstration, in which light it is considered by Legendre and others, among whom is Mr. Darley. On this axiom, *viz.*, that two straight lines cannot inclose a space, depend the first twenty-eight propositions of Euclid, which leave us in possession of the fact, that two right lines which make angles with a third, on the same side, which are together equal to two right angles, will never meet, however far they may be produced in either direction. These two lines Euclid calls parallels. Now, to proceed further in the chain of reasoning, without some reference to the senses on the subject of these lines which never meet, has hitherto been found impracticable. On looking at two such lines, various very

evident properties suggest themselves. They are, for example, equidistant; their directions are the same, that is, they always mark the same point of the compass, and so on. Now, conceive a fixed line, and a point exterior to it. From the exterior point draw a perpendicular to the fixed line, and about the exterior point let a right line revolve. It is as evident to the senses as that 'two straight lines cannot inclose a space,' that the revolving line will first, if long enough, cut the fixed line on one side of the perpendicular, and afterwards on the other, and that, in passing from one of these positions to the other, there is one position, *and one position only*, in which the moving line will never meet the fixed line, though both be ever so much lengthened. All this is not only self-evident, but demonstrated, with the exception of the assertion in italics, that there is only one such position. For this Euclid appeals to the senses, though in an indirect way, not well calculated to make the simplicity of the assumption perfectly manifest.

Having demonstrated that the line A C passing through A is parallel to B D, if the angles C A B and A B D are together equal to two right angles, instead of saying that A C is the *only* parallel to B D which can be drawn through A, he says that every other line passing through A is not parallel to B D,



which is pretty much the same thing. This is the famous twelfth axiom, which Mr. Darley says 'has been justly denominated the *disgrace* of Euclid.' This is what is to keep geometry from ever becoming a popular study. We confess to having simplified the form of the axiom, but the actual point assumed, is that of Euclid; the 'monstrous and unwarrantable supposition,' (p. 123.) 'not self-evident,' p. 38. But we have Mr. Darley's authority for stating that his system of parallels is 'simpler, shorter, and more strictly demonstrative than that given in the common Euclid.' (p. 38.) To it then we turn with great expectations, for though we think the method of Euclid extremely simple, and fond as we are of what is simple, we are still fonder of what is simpler.

In p. 16 our author proceeds thus :

'Two right lines are said to be equally distant from one another, when any two points whatsoever in the one not the greater, and any two equally remote points in the other being taken, the right lines which join each opposite pair of points towards the same hand are equal to each other.'

'Parallel right lines are those which are equally distant from each other. This is the simple, clear, and familiar notion of parallels, &c.'

Now suppose a pupil were to put this question—You tell me that, in order to ascertain whether or no lines are to be called parallel, I must measure equal distances on both, and join the extremities, and see whether or no the lines which I get are equal; if I have done this with twenty sets of distances, and found the new lines equal, may I conclude that the lines are those which you mean to call parallel, or must I measure a twenty-first pair of distances, and so on *ad infinitum*? The author must reply, No; for one trial is sufficient: if the new distances are equal in one case, they will be so in every other; but this I cannot prove, it is a theorem which you must take for granted. 'In fact, we conceive the principle must be self-evident to any one who has a clear notion of right lines' (p. 39). To this *we* conceive the pupil would demur; in fact this theorem is assumed in the definition, in spite of the author's frequently expressed disapprobation of such a proceeding. Thus it is by no means certain to the beginner, that there are such things as parallels at all, according to this definition; but this, the author says, 'depends on a *self-evident* truth in the mind of the reader, which, because it is so obvious, writers on geometry do not think it necessary to mention.' What! is it so clear as to require no mention, that there are lines from which if millions of pairs of equal distances were cut, the two lines joining the extremities of each pair would be equal, and this when it is declared that Euclid, in assuming the axiom above mentioned, has assumed that which is not self-evident? Euclid, having shown that there is such a thing as *one* parallel to a given line passing through a given point, assumes on the clearest grounds, as far as the senses are concerned, that there cannot be two: Mr. Darley sets out with a definition which leaves the student without any certainty that there are such things as parallels, and which definition involves a theorem of as much complexity, as any which is proved in the first book of Euclid. And yet in the same work we find Euclid's definition of perpendicular lines objected to, because it assumes that an angle can be divided into two equal parts. (p. 37.)

This 'monstrous and unwarrantable' doctrine of parallels is of itself a serious objection to the work in question. We recommend it, nevertheless, to parents and teachers, urging them however to replace the system of Euclid upon this point. If, however, in a subsequent edition the author strikes out most of his notes, placing in the text as much of them as is

absolutely necessary, and does not quarrel with the simple and natural doctrine of parallels, until he can supply another in its place which requires less assumption, we shall rank his work among the most successful efforts to simplify the abstruse science of geometry, which have ever been made in this country.

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#### SCHOOL EDITIONS OF TERENCE.

IN a former number of this Journal it was recommended, that the first book to be put into the hands of one commencing the Latin language should be the Gallic war of Cæsar, and, among other reasons for selecting this work, we pointed out the fact, that in the first book of the Commentaries no verb ever appears in the second person, and one only in the first. This circumstance enables the teacher to consult the convenience of his pupil by abridging the accidence of the grammar, and by placing before him the conjugation of the verb in one third of the usual space.

We shall not at present state any other reasons for selecting Cæsar, though other reasons may readily be given; but it may be asserted with some confidence, that a pupil will learn from this book a very considerable portion of the Latin language; and under a judicious teacher he will soon be able to translate into the original any passages of his author given him in English.

As soon as he is thoroughly acquainted with the whole Gallic war, he will be well prepared to encounter the new difficulties presented in dialogue; and he will not easily find a book better adapted to his purpose than the plays of Terence. It is therefore important to examine the different editions of this author that are used in English schools. This task we propose to undertake; but we shall first mention those conditions, which, in our opinion, must all be fulfilled before we can give unqualified praise to any edition. We look, then, first for a correct text, founded on manuscript authority, allowing some latitude, however, for correction of the text, even in opposition to MSS., where that correction is founded upon undoubted principles of criticism. Important variations of the text may always be given at the foot of the page without any material sacrifice of space. In addition to a good text, we may fairly expect some short account of the author, of course in English; and in a chronological table of a single page, it would be easy to give a few dates connected with the writer, or the political events

of his time. Any disquisition upon his style and writings is, perhaps, better omitted. Such essays are seldom of much value; and in boys they only encourage an affectation of knowledge. A collection of good notes is almost essential for the use of the master, who has but rarely time enough to draw up any for his own use, even supposing him to possess the ability. But these notes, we cannot too often repeat it, must be in the English language; and, farther, it seems expedient that they should be separated from the text; for when, as is usually the case, they are given at the foot of the page, the pupil will, for the most part, neglect them while *preparing* his lesson, seeing that he can answer any question from his master by referring to them at the time, and, of course, if no question be asked, no note is ever looked at. As to the matter of the notes, the most valuable are those which explain any peculiarity of construction, by reference to other similar instances in the same author. Indeed, in such a writer as Terence, where scarcely any historical or geographical information is called for, such notes as we have described are nearly all that is requisite. We must make, however, one addition. It is true that, in almost every school, Terence is treated as a prose author; but it is equally true that his lines are strictly subject to the laws of rhythm; and considering that his metres bear a much closer affinity to those prevailing in our own language, than the hexameters of Virgil, or the lyrical compositions of Horace, there does not seem any good ground for this neglect. We must therefore look upon any edition of Terence as imperfect, which does not afford a pupil the means of comprehending his metres, and classifying those prosodial difficulties which school-grammars omit to notice. Lastly, a good verbal index will be of great service both to master and pupil, where the mode of explanation consists mainly in comparing one passage with another similar to it. The six plays of Terence occupy but little space, so that all we have proposed may certainly be afforded to the schoolboy without any extravagant increase of bulk or expense.

The Delphin edition, with which we commence, possesses none of these requisites, with the single exception of an excellent index; and this indeed is too often the only merit of the Delphin editions of other authors, and has alone saved them from the neglect which they merit.

The Westminster edition contains, we know not why, only four plays, the *Heautontimorumenos* and the *Hecyra* being

omitted, though the former of these two plays is referred to in one of the notes. It is difficult to decide what text has been adopted by the anonymous editor, as he gives no information upon the subject; but, from a collation we have made of the Adelphi, we may venture to state that the readings are almost always supported by MS. authority. An unnecessary attempt is, however, occasionally made to reduce the orthography of Terence to the standard of our English schools, by rejecting such forms as *neclegentia*, Prol. 14; *servolus*, 1, 1, 2; *parvolus*, 1, 1, 23; *tristitiem*, 2, 4, 3; *totiens*, 1, 2, 48; and the accusatives *nobilis*, Prol. 15; *aedis*, 1, 2, 8; 2, 1, 16; *testis*, 2, 1, 49, &c. Yet even in these changes there is a want of consistency, for we find in different passages, *clivōs*, *aequum*, *volt*, *salvōs*, and even the very words *servolum*, 4, 2, 27; *parvolam*, 2, 4, 10.

In 3, 1, 1 we observe a passage that requires notice. It must be granted that the editor has a numerical superiority of MSS. in his favour for the reading. S. *Obsecro*, *mea nutritrix*, *quid nunc fiet?*—C. *Quid fiet rogas?* Three of the best, however, have *quid fiat rogas?* And even if all had agreed in the reading *fiet*, still the idiom of the language must have decided against it. Thus 3, 3, 19.—S. *Quid agitur?*—D. *Quid agatur?*—and again, 1, 2, 4.—M. *Quid fecit?*—D. *Quid ille fecerit?* Nothing is more common than, when a question has been asked by one party, for the other to repeat it with an expression of surprise; and invariably is the indicative changed to the subjunctive.

Again, in 2, 1, 24. The Westminster text has—*Non sicut egestas facere nos.* Tu nunc tibi, &c.—with every MS., except the Codex Bembinus; but this being by far the best among them, and as the metre supports it, we certainly prefer *sicut*.

We confess these criticisms are minute, but it is through these slight corruptions that the text of Terence has been converted from verse to prose; and though Bentley may have been too bold in his notions of restoring the original, there can be little doubt that his alterations are for the most part judicious. Certainly no critic had ever a better conception of his author than Bentley had of Terence. If he has materially erred, it has been in giving more than the proper weight to his ideas upon accent, and altering the text so as to meet these ideas in defiance of all authority; for instance, in 1, 2, 50, —

Curémus aequam utérque partem : tu álderum  
 Ego item álderum. Nam ambós curare própemodum  
 Reposcere illum est quém dedisti—

the position of *ambos* is well adapted to mark the emphasis upon it. But Bentley has laid down a law that the accent cannot fall upon the last syllable of a word in the second meter of an iambic trimeter; and, in obedience to this law of his own creation, he transposes the words *ambos* and *curare*—

Ego item álderum : nam cùrare ambos própemodum—

The change seems to us a change for the worse even as regards the rhythm, and certainly as regards the emphasis, a principle of more importance than any other, and one to which even the laws of prosody must yield. That there is generally a cæsura in the middle of the third or fourth foot of the common trimeter is true; and such a cæsura will prevent the accent from falling otherwise than Dr. Bentley wishes; but we must not insist upon this cæsura as an absolute law.

In the passage we have been considering, the Westminster editor has the correct reading—*ambos curare*. In other instances, however, the same editor has rejected the emendations of Bentley, where, by the slightest alterations, such as *ista* for *istac*, *intercessē* for *intercessisse*, &c., he has preserved the metre of our author; and in more than one case the change made by Dr. Bentley has been as much called for by the principles of the language and the sense of the passage, as by the nature of the verse. Occasionally the great critic seems himself to have passed over what appears to us to be at variance with the Latin idiom. In the Andria, 1, 3, 10, the MSS. have—‘ Haec Andria, Sive *ista* uxor, sive amica ’st, gravida e Pamphilo ’st.’ Bentley saw that the metre was faulty; and his remedy was to change *Sive* into *si*. That *si* . . . , *sive* . . . may be found together, is possible; but the correction here required, is simply *sive* or else *sive ea*. To apply to the same person in the same breath, two inconsistent demonstratives, *haec* and *ista*, is contrary to all reason. Besides, after the person had been defined by the words, *haeo Andria*, no demonstrative is required, or even admissible. The little unemphatic *ea* (which never has a demonstrative power) is the only pronoun that the sense would admit; perhaps the metre also would admit it.

The notes of the Westminster edition are all in Latin, and therefore in general useless for the school-boy. We must also object to them, that the pupil is too often referred to *other* authors, which he may, perhaps, not possess; and this, too, when reference might as readily be made to other parts

of Terence himself. The little phrase, ‘*quid istic’—Well, have it your own way*, is, of course, a difficulty to a beginner; and the more so, as his dictionary will most probably afford him no help. This phrase occurs at least three times in the Adelphi alone, *viz.* 1, 2, 53; 3, 2, 52; and towards the end of the last scene but one. The Westminster editor gives us notes upon two of these passages—Locutio Terentio familiaris et aegre consentientem significat;—and again—Verbum aegre consentientis. Donat.—But, we repeat, all difficulties of this kind are best explained by an English translation, and a reference to other passages of the same kind, and, if possible, in the same author. Now, if a boy uses this Westminster edition for the single play of the Adelphi; if further he reads the notes in spite of their Latin form, and obeys the directions of the editor in consulting the different books to which he is referred, he must possess Cicero’s speeches and orations, Homer, Virgil, Horace, Ovid, Plautus, Livy, Florus, Phaedrus, the Greek Testament, Nonius, Festus, Priscian, &c.; and in many cases he must have particular editions of these books, for instance, Drakenborch’s Livy (7 vols., 4to.), Duker’s Notes on Florus, Bentley’s Terence, &c.

Lastly, no information regarding Terence himself is given in this edition, and all questions of metre are invariably passed over.

The German edition of Reinhhardt is, perhaps, the best existing edition for the use of schools. The text, where it differs from the preceding edition, has almost always the advantage. The metrical accents of Bentley are inserted, and, with this assistance, the pupil will find much less difficulty with the metres. To the life of Terence, the disquisition on his metres and the notes, the chief objection is that they are in Latin; but it is not fair to make this a subject of complaint against the editor, seeing that to an English pupil they are certainly more accessible in their present form, than they would have been in German. But we still recommend the book as the best for schools, first, for the correctness of the text, and secondly, for cheapness. The paper, it must be confessed, is not very good; but those, who are more particular about the colour and quality of the paper than the goodness of the edition, will find every thing they desire in the Baskerville Terence, the only objections to which are that it is especially difficult to translate the Latin, or detect the metre of the verse. As a book intended only to lie open on a study table, it is certainly superior to the rest.

As we have had occasion in these remarks to notice more than once the inattention of editors to the metres of Terence,

it will not be out of place to enter somewhat at length upon this question. Undoubtedly according to the usual notion of the metrical laws to which the Latin comedians yield obedience, it cannot be surprising that the subject has met with such general neglect. It is said, for instance, that, in the iambic verse, the last foot must indeed be an iamb or pyrrhic ; but that, in all the other places, for the iamb may be substituted a dactyl, spondee, anapest, tribrach, procelesmatic, nay, according to some, even a cretic ; so that the rhythm of the verse depends upon little more than the shortness of the penultimate syllable. Thus the following lines, which Virgil intended as dactylic hexameters, would pass muster very well as unobjectionable iambic lines :—

Virginibus Tyriis mos est gestare pharetras—  
Huic conjux Sichæus erat ditissimus agri.

As for the procelesmatic, we feel considerable difficulty in conceiving how any human voice can utter four short syllables in succession. Yet, such feet, if we admit only the common laws of prosody as taught in our grammars, occur repeatedly in every play of Terence. In but a single scene of the Adelphi, five examples present themselves : 3. 2. 20, *e | riperem ocul | os*; 21, *ruerem ager | em*; 23, *sine me ego*; 37, *Era lacru | mas*; 51, *neque preti | um*. In the second place, the violent elisions, which occur in all Latin poets, but more particularly in the comic writers, would appear even more unnatural than they do, if our notions on this subject had not been hardened by long obedience to the dogmas of prosody. In many instances, the greater part of a word is absorbed ; and in the phrase—*i ergo*, (Ad. 5. 1. 68.) the first word is actually annihilated. But we shall not have stated the case against Terence's metres in its full strength, unless we add, that even all these licences, when admitted, are not sufficient to explain the difficulties of his metre. Thus we find in the last scene of the Adelphi such feet as—*quidem por | ro*, vv. 7 and 22; *quidem muli | erem*, v. 17; *quidem tuo*, v. 17; *quidem pri | ma*, v. 19, &c.

Yet, after all these concessions, we still contend that to a Roman ear the verses of Terence had all the melody of the pure iambic verse. The difficulty we believe to arise from our inattention to, and ignorance of Roman pronunciation ; for most undoubtedly, according to modern accent, we must all agree with Wieland, that a very large proportion of the verses are wholly devoid of melody. That this is the chief cause of the discord appears from the fact, that, where an iambic line ends in a word of three syllables, and consequently the English and Latin accent coincide, the verse is not un-

frequently in perfect harmony. From the third scene of the third act, we take the following successive lines (vv. 11—15.) ; and we only request the reader to be on his guard in pronouncing *lætius*, so as not to let his tongue soften the two syllables *ti-us* into *shus*.

Quo pácto haberet, énarramus órdine.  
Nil quicquam vidi lætius. Pro Júppiter,  
Hominis stultitiam. Cónlaudavit filium;  
Mi qui'd dedissem cónsili' egit grátiás.  
Disrúmpor. Argent' ádnumeravít ilico.

But the only satisfactory mode of arriving at any conclusion will be to take a whole play, (the *Adelphi* for instance,) and to examine the metre throughout. This we ask the diligent reader to do, as we ourselves have done ; and we think he will not find many impediments, if he take into account the principles which we shall now endeavour to establish.

In every language, at any given time, it will be found that changes of pronunciation are taking place ; the necessary consequence of which is, that the *written* language is an imperfect representation of the *spoken* tongue. Nothing but a standing committee of orthography with despotic powers can prevent this being the case. In our own language and French the difference is very strongly marked ; but in Spanish the power of the Royal Academy has been for the present effectually exerted, in the re-adaptation of the one to the other. Another half century, however, will prepare fresh work for that society.

In the second place it will be generally allowed, that, in all languages, there are certain combinations of words where the syllables are huddled together in pronunciation, and lose much of their individual power, while the very same words in other less familiar combinations are read as they are written. To the abbreviated forms of—*God be with you*—*How do you do*—*Three of the clock*, &c.—every language can furnish parallels. In Latin, for instance, the phrase, *bono animo es*, seems to have degenerated into some sound of a cretic form. It repeatedly occurs as such in the *Adelphi* ; and in the *Rudens* of Plautus, 3, 3, 17, we have the identical phrase in the last place of a line of cretics :

Ó sáiu | tis meae | spes, tac', ac | bono animo 's.

If such contractions were frequent or variable, it would of course be a hopeless inquiry ; but we believe we shall have room, even in the remainder of the present article, to bring forward, and perhaps explain almost every difficulty that occurs in the *Adelphi*\*. But the reader must not trust

\* To those not familiar with Terence, it may be stated, that the *verses* of the

altogether the prosodies of the school-grammars or the examples given in the *Gradus ad Parnassum*. The latter work informs us that the second syllable in *suspicio* is short, and quotes an hexameter beginning with *Suspicione Paris*; but the line is deceitful. It should be pronounced *Suspicyone*, &c. like *Fluviorum*, &c. in Virgil. In Plautus and Terence the word is very common, and invariably is the second syllable long. It does not occur in Virgil or Horace; but in the later writers (when the final *o* had lost its power), as Martial, Ausonius, &c., we meet with it again as *suspicio*. The laws of prosody again are both imperfect and inaccurate. The little imperatives—*mane*, Ad. 2, 3, 10; 3, 4, 21—*cave*, 2, 1, 16; 3, 4, 12—*vide*, 2, 1, 41; 2, 2, 30; 4, 2, 11, 20—*abi*, 2, 1, 18; 2, 2, 12; 4, 2, 25, &c.—*jube*, 2, 4, 21; 5, 5, 10, &c.\*—*redi*, 2, 1, 36—*tace*, 2, 4, 16—are all of them (in the comic writers at least) to be pronounced either as two short syllables or one long syllable. In some of them the latter is the more probable, as Dr. Carey has shown in the case of *cave*, by reference to Cicero's remark, that the cry, *Cauneas*, i. e. *Cauneas ficus*, was a bad omen from the identity of the sound with *cave ne eas*. That these words should depart from the general analogy of the contracted imperatives is not remarkable, when we consider that they are used almost as interjections. With ourselves *look* has degenerated into *lo*. The French have their *voi-la*, *v'la*, *voi-ci*, and *gar* for *garde*.

The reader of Virgil, recollecting such lines as *Uno eodemque tulit partu*, &c., will not be offended by a *crasis* not more violent in *meo*, *mea*, *meorum*, &c., *de eadem*, *eum*, *tu eum*, &c. Bentley was of opinion that in these cases the *e* before the vowel had the sound of our *y*. Such instances, however, as *tu eum*, 4, 2, 21—*qui eam*, 5, 6, 9—and all those (the above case from Virgil among others) where a vowel of the preceding word is elided, notwithstanding the *crasis*, are obstacles to his explanation. If the *e* has the sound of our consonant *y*, as it exists in *youth*, *young*, &c., no elision

*Adelphi* are all, with the exception of a few lines in Act iv. Sc. 4, either iambic or trochaic. In the editions where the metrical accents are marked, as Bentley's, Reinhardt's, &c., there is no difficulty in distinguishing the two metres. When the accent appears on the *first* syllable of a foot, the measure is trochaic, otherwise iambic. It will be found convenient, in reading the trochaic lines, to prefix some long syllable, and thus reduce them to iambics. The ear of an Englishman is generally better acquainted with the iambic metre.

\* The acts of the *Adelphi* are differently divided in different editions. The references in the text are always to that of Reinhardt. The difference between his division and Bentley's is this:—Act v. Sc. 1 and 2, in Bentley's edition, correspond to Act iv. Sc. 8 and 9, in that of Reinhardt; and Act v. Sc. 3, 4, 5, 6, 7, 8, 9 of Bentley respectively to Act v. Sc. 1, 2, 3, 4, 5, 6, 7 of Reinhardt.

could have taken place. Such a word as *is, eu, id, &c.*, when not emphatic, is, above all others, likely to suffer by a hasty delivery, just as we ourselves often shorten *him* and *them* into '*m*' and '*em*'.

Of the same nature with the above are the contractions occurring in *sua, tuum, fuisse, fuit, puer, 4, 7, 10; duo, 5, 1, 37.* If the other class of words will admit of our giving the *y* sound to *e*, Bentley may be right in reading these *swa, twum, &c.* Whether he is so in all the cases, we doubt. If *forem* and *fore* have arisen from *fuerem* and *fuere*, it is not improbable that *fuisse* too might be pronounced *fosse*; and the Italian has, in fact, adopted *fasti* for *fuisti*; *fossi, &c.* for *fuissem, &c.* It should also be recollect ed that while Ennius, on the one hand, wrote *sas* for *suas*, the Troubadours used *mos, ma or mia, mon*, for *meus, -a, -um, mos, mas or mias* for *meos, meas*; and in like manner they abbreviated the corresponding parts of *tuus* and *suis*, by laying aside the first vowel. The possessive pronouns in the French, Spanish, and Italian languages also, particularly in the older writers, bear evidence of a similar reduction.—(See Raynouard, Grammaire comparée, p. 161.)

The case of *puer\** is explained at once by the forms *Lucipor, Marcipor*; and inscriptions exhibit both *por* and *pora* for *puer, puera*. The word no longer exists in Italian, except in some of the provincial dialects, and in these it is always a monosyllable. *Duo* is closely analogous to our own *two*; but it is safer to compare a language with itself, and the tendency of the Latin to blend the two syllables, *du-o, du-i, &c.*, into one is clearly shown in the forms *bonus, bellus, bellum, Bilius, bis, bini, viginti, &c.*, from *duonus, duellus, duellum, Duilius, duis, duini, duiginti, &c.*

The most violent contractions are met with in the genitives, *hujus, ejus, illius*; and we even find elision of a proceeding vowel in addition as : Cratin | i huius | 4, 2, 42 ; es | se eius | 4, 3, 9 ; prim | um huius | 5, 6, 6 ; nepo | ti huius | 5, 7, 17. Some part of our difficulty arises from the English barbarism of pronouncing the *i* in these words, like our own *j*. Setting this aside, it is not more extraordinary that *hujus* should at times be merely a monosyllable, than that *nullius* and *nulli* should both be genitives of *nullus*. Indeed the forms of *hujus* and *nullius* are strictly analogous. The stems both end in *o, ho, and nullo*, whence the genitive is produced by affixing the termination belonging to that case, *viz., ōs, or rather iōs*. This would give us *nulloios* and *hoios*. The old

\* Goeller, in his edition of the *Aulularia* (4, 1, 9), has *puer* for a dissyllable, but he has not one MS. with him. They have all either *pueri* or *pucris*.

genitive of the relative *quoius* is of this form, and the Homeric *λογος* has only lost the sibilant. In the later Latin it was common to represent the diphthong *oi* by a long *i*, and a mere *o* by the vowel *ū*. Hence *nulliūs* and *huius*. The Latins also often dropped the final *s*, as in the first declension, where the different forms of the genitive—*familiās*, *familiai*, and *familiae*—seem all to have arisen from *familiās*; and again in the fifth, where an old genitive *rēis* seems to have been the parent of all the forms of that case—*rēi*, *rēi*, *rē*, *rēs*. So in the *o* declension, the Greeks seem to have passed from *λογοσ* through *λογοο* to *λογου*, and the Latins from *nulloios* through *nulloī* to *nulli*; but they had also *nulliūs*\* by shortening the penult of the original genitive. The pronouns of a language generally retain the old form longer than the other nouns, yet they also must in the end submit to curtailment and contraction. What the shorter pronunciation of the genitives *hujus*, &c., may have been, it is useless to inquire; it is enough for our present purpose to know that it was monosyllabic.

In 4, 4, 14, we find *diu* a monosyllable, and in 4, 5, 15, *diu* *huc* becomes one. The French *jour*, *journée*, the Italian *giorno*, all connected with the Latin *diu*, *diurnus*, &c., are satisfactory witnesses (independently of our organs of speech) that *di* followed by a vowel sometimes assumed the sound of the English *j*. Another example of the same change appears in the Italian *oggi*, from *hodie*. Nay, the metres of Terence almost require us to consider *hodie* itself as a dissyllable. The derivation of the word, too, is in favour of this, for an anapest *hōdiē* is inconsistent with the length of the allative *hō*. In 2, 2, 7, the metre requires that *qui hodie* should represent either an anapest or a spondee, but it seems rather a violent elision to sacrifice the long vowel in *qui* to a short vowel in *hōdie*. In 4, 2, 48, *exerce | bo hodie*; 5, 7, 10, *postre | mo hodie*; 5, 7, 22, *processis | ti hodie*: we have other instances of the same nature, and certainly wherever the word occurs in this play, the metre will, to say the least, be improved by giving it the very pronunciation of the Italian.

The genitive *rei* occurs repeatedly as one long syllable, viz., 2, 1, 23; 4, 5, 10, &c.; and, in 4, 2, 6, we find the same in the case of the dative. But Cæsar himself, in a fragment of his *Analogia*, particularly mentions that *specie* and *die* were the correct forms of the genitive. Virgil,

\* In such a word as *nulloīs* the sound of the *i* may be attached to the preceding or following vowel, and will consequently modify accordingly the pronunciation.

Horace, and Sallust confirm what he says. The case of the dative is still more simple. As in all the other vowel declensions, the iota of the dative is or may be absorbed—*a*, *musāi*, *musæ*; *o* not *nulloī*; but *nullo*, or *nulli* (*λογη*); *i*, not *turriī* but *turri*; *u*, *gradui*, or *gradū*; so when the final vowel of the stem is *e*, both analogy and authority support the claim of *die* to be considered as a secondary form of the more common dative *diei*. We might then without impropriety write, whether as a genitive or dative, *re* without an *i*; but it is matter of little importance which form be presented to the sight, so long as it be understood that these cases of *re* were often, if not always, monosyllables in Terence.

It is not a slight error in our prosodies that in cases of elision they always sacrifice the final vowel of the first word. We have already pointed out as one of the absurd consequences of such a principle that the imperative of *eo*, if thrown before a vowel, would be annihilated in the embrace. A fate not much better would befall the particles *dum*, *cum*, &c. But Terence had more mercy than our prosody-writers, and leaves them untouched in many cases, notwithstanding the following vowel is ready to absorb them, thus : 1, 2, 38, *Argen* | *tum* *dum e* | *rit*; 2, 2, 3, *concertas* | *se cum e* | *ro*; 2, 2, 24, *ac-*  
*tum ag* | *am*, according to Bentley's reading; 3, 2, 43, *fatea* | *tur cum am* | *et*: 5, 1, 37, *Duo cum i* | *dem*; in all of which, Bentley observes, the particle occupies the centre of a trisyllabic foot, just as in Horace we have *coc* | *to num* *ad* | *est*.

Moreover in the common instances of elision it seems probable that both the vowels are often expressed as a kind of diphthong. Where the terminal vowel is an *i* or *u*, the sound of *y* or *w* may be substituted; and no part of the sound will be lost. Again, instead of sacrificing a long vowel to a following short one, it is acknowledged by all, except those who compile Latin prosodies, that the more correct course is either to deprive the long vowel of its quantity, still leaving it a partial existence, or at once to turn the tables upon the second vowel, and sacrifice it to its superior. In the first case *Di ament* will be an anapest, *Di āment*; in the second a spondee, *Di 'ment*. In, 5, 1, 11—*Ex te adeo est ortum*—the power of the sentence is almost wholly centered in the pronoun, and yet, by the orthodox rules of scanning, it nearly disappears in pronunciation. Would it not be more rational to read the phrase somewhat like—*Ex té 'jo 'st ortum*, softening the consonant of *adeo* as in the case of *hodie*; or thus—*Ex té dyo 'st .ortum*. The same remedy

would be of service in 4, 5, 76. to *itaque ade lo*; and possibly *ne abeas*, 5, 3, 1.; *me habeat*, I, 1, 25. should be melted down into spondees *ne'byas*, *me'byat*, or something similar.

Dr. Bentley has said of the pronouns *ille*, *iste*, *ipse*, that the comic writers often make the first syllables short. As regards *ille* and its oblique forms with the derived adverbs, and perhaps *iste*, it will found necessary in some places to consider them as monosyllables; nor is there any violence in such a supposition. The Roman language of the middle ages exhibits this pronoun in the various forms of *el* or *lo* for the singular masculine, *il* or *la* for the singular feminine; and in the plural *li*, *cls*, *los*, as masculine, *las* as feminine, besides *lor* for *illorum*. In the French and Italian languages the monosyllabic form still prevails—French, *il*, *elle*, *lui*, *le*, *la*, *ils*, *elles*, *les*, *leur*—Italian, *lo*, *il*, *la*, *gli*, *li*, *i*, *le*, *lor*. In 3, 4, 30. *ille bonus*, followed by a consonant, represents some one of the feet that are admissible in an iambic line. Dr. Bentley would make it, that monster, a procèleusmatic, instead of a dactyl, *il bonu'*. The line 4, 5, 58. begins—*Prodidis | ti et te et il | lam miseram*. Bentley would make the inclosed syllables constitute a dactyl, the pronoun *te*, not a very unimportant word in the sentence, almost disappearing; whilst, on the contrary, it is entirely preserved if we pronounce the words—*Prodist | y et te 't | 'lam miseram*. These dactyls, anapests, and proceleusmatics, for ever occurring in Terence according to Bentley, are the very bane of all melody in iambic verse. That the anapest and perhaps the dactyl are occasionally to be admitted we will allow; but they must not form the staple of the verse. Many of these objectionable feet may be disposed of by sliding over some of the short vowels. Thus *malevoli*, Prol. 15, *benificium* 1, 1, 47, may be held equivalent to *mal'voli*; *ben'ficium*, just as in Italian the adverbs *male* and *bene* are frequently deprived of their final vowels. *Homines*, Prol. 15, *animus*, 24, perhaps, lose their middle vowel as they do in French—*homme*, *ame*. So *femina* became *femme*; *asinus*, *asne* and *âne*; *domina* among the Italians *donna*, among the French *dame*. *Vehemens*, Prol. 17, may be a spondee, as it must be in the line of Horace beginning—*Vehemens et liquidus*, &c. Indeed when the letter *h* has on either side of it like vowels, we are always at liberty to contract the two syllables, as *reprehendere*, in Italian *riprendere*, and *nihilo* occurring in Horace at the beginning of an hexameter—*nihilo deterius*, &c.—till Fea and Doering restored the reading of the old editions, perhaps to save the metre, though Fea also gives as a reason, his desire to adhere to the *natural order of words*. He would,

of course, always write *minus nihilo, longius eo, &c.* *Populo* Prol. 19. possibly *pop'lo*, as in French *peuple*, and in Latin *poplicus* or *publicus*. Nay, Plautus, Aul. 2, 4, 6, has *pōpli* in the last place of an iambic trimeter. *Opera*, Prol. 20. i. e. *op'rā* like the Spanish *obra*, or the French *œuvre*. *Sine*, Prol. 21, or *sin'*, like *sans* French, and *sin* Spanish. *Aperient* Prol. 23, for *ap'rient*, like the Italian *aprire, ubrir* of the Troubadours, *ouvrir* of the French. So from *co-operire, coprire* Italian, *couvrir* French, *cover* English. In the *Andria*, 4, 1, 8, *ap'rient* closes a line of cretics.

This system of abbreviation might be extended to many other words—*ad'lescentia, mis'ria, stab'lis, sim'lis, gen'ris, al'quis, fam'lia, &c.* Again, by giving the sound of *y* to *i* followed by a vowel, we shall improve the melody of many lines, as *häryolor*, 2, I, 48—*auxilyum*, 2, 1, 1—*mūlyerem*, 2, 1, 18; 2, 2, 21; 4, 2, 27; 4, 3, 8; 4, 5, 13—*redyero*, 2, 2, 24; 4, 6, 6—*pēryerim*, 2, 4, 19—*pēryimus*, 3, 2, 26; 3, 4, 12—*praetēryeris*, 4, 2, 42, &c. In the form of *mūliēres* considered as of four syllables, there is nothing to prevent the lovers of tribachs, &c. from placing the word in any part whatever of an iambic verse; and yet it is a remarkable fact pointed out by Bentley (Eun. 2, 2, 36), that it is invariably so placed as to have the accent on the first syllable, *mūliēres*. This can only be explained on the supposition, that it was to Terence a word of three syllables, *mūlyeres*, with the stronger accent upon the first syllable. And here we will observe, that the syllable *li* followed by a vowel in Latin words, sometimes corresponds to a double *λ* in the Greek language, as *αλλος* and *alius*—*ἀλλομαι* and *salio*—*φυλλον* and *folium*. If we may infer from this that the *λλ* of the Greek and *li* of the Latin language were pronounced like the *ll* of the Castilians, the *lh* of the Portuguese, the *l* mouillé of the French, and *gli* of the Italians, it follows that such words as *melius, alias, alienus, &c.* may be considered as all beginning with a long syllable, the two first being trochees, and so on. It is said by the Latin grammarians, that every word (with some few exceptions) had necessarily an accent, and that it could not be thrown farther back than the antepenult. Such a law must, in fact, belong to every language; but so long as a Latin word is allowed three and four short syllables in succession, it will be somewhat difficult to find a satisfactory position for an accent. *Mulieres*, for instance, must become *mulieres*, (just as we barbarously pronounce it,) in defiance of prosody, and equally in defiance of rhythm. On the other hand, *mūlyeres* corresponds, in the first place, to *moglie* in the

Italian; it agrees with the accentual law, having the strong tone upon its antepenult; and, lastly, it will be found always consistent with the harmony of Terence's lines.

So far we have examined the vowels only; but there is reason to suspect that many of the consonants in certain positions were equally liable to disappear in pronunciation. That the *final s* was frequently a silent letter, at least among the older writers, is proved by the authority and practice of Cicero himself. But the fact is too familiar to the readers of all the older poets to require further notice. As examples in the present play may be given—*sumu'*, 3, 1, 4—*domu'*, 4, 7, 42—*bonu'*, 3, 4, 30—*vetu'*, 5, 1, 17—*novo'*, 5, 6, 15, &c. We might perhaps have added—*quibus*, 1, 1, 11; 4, 3, 14, &c. and other words of the same form; but we hesitate in so doing, from a suspicion that the letter *b* between vowels, and especially short vowels, was itself liable to extinction. The syllable *bi* or *ibi* seems to have been originally attached to words as significant of the dative\* case, corresponding perhaps to the Homeric suffix *φι*, and to *bhyām* and *bhyas*, which in Sanscrit mark respectively the dative and ablat. dual and plural. The same sound, with the addition of an *s*, i. e. *būs* or *ibūs*, marked the same case in the plural. In the singular, the pronouns alone retain the full form, as *tibi*, *sibi*, *ibi* (from *is*), *ubi* (from *quis*), originally *cubi*, (as in *si-cubi*, *ne-cubi*, &c.), *utro-bi*, *ali-bi*, &c. But in the plural we may trace the full form through all the declensions, *deabus*, *duobus*, &c. We may then safely assume, that in an earlier state of the language, the letter *b* entered into every dative, *musabi* degenerating into *musāi* and *musæ*, *musabus* into *musais* (*μουσαῖς*) and *musis*, and so with the other declensions. *Cubi* became of course *cui*; and the word *mihi* bears evidence of its being a corrupted form, for the letter *h* in the middle of words, and above all between vowels, seems always to be the shadowy representative of some departed letter. Is it then a very hazardous supposition, that in the other pronouns, *sibi*, &c. (and perhaps *quibus*, *omnibus*, &c.) the *b* was often wholly neglected in pronunciation, so that they were nothing more to the ear than *si*, *ti*, *i*, *ui*? Now *mi*, *ti*, *si*, are the very forms under which these words appear in the Roman, Spanish, and Italian languages; and the French also at one time possessed the two first (Raynouard, p. 143). *I*, *hi*, *y*, or *hy*, became the representative of *ibi* in the same languages (Raynouard, p. 341); while *ubi* was reduced to one of the forms,

\* We use the term *dative* solely because it is the received term, but cannot admit that the notion of *giving* is the original, or even a common meaning of that case.

*o, u, or hu.* The reader does not require to be told that the French still possesses *ubi* and *ibi* in the shape of *ou* and *y*. We are the more eager to establish this point, as it will enable us to dispose of a number of our procelesmatic enemies as—*sibi fie | ri, 4, 3, 4*—*sibi gladi | o, 5, 7, 1*.

Whether sentence of condemnation is to be passed upon the same letter in—*dabit frus | tra, 2, 1, 54*—*jubet fra | ter, 5, 6, 1*—and the imperatives—*jube, abi*—above mentioned, we will leave to the consideration of the reader.

The letter *c* may next be called to the bar; and we believe that it likewise must, in certain positions, be considered equally powerless. A comparison of *fucere* with *fare* Italian, and *faire* French—*oculus* with *œil*, of *tacere* with *taire*, &c. (and a hundred examples might be produced) furnish evidence that such a suspicion is within the limits of possibility. *Tacet cur | 4, 5, 5*, adds strength to the suspicion as regards the last of the three. Of the others we are content to say, that the metre will be brought nearer to the iambic rhythm if we treat *facere* as a trochee, and *oculos* as a spondee. For instance, we can then dispose of some more feet, with the long name, as *e | riperem ocul | os, &c.* The word *lacruma* again is not without suspicion, when we find such a foot as *era lacru | mas, 3, 2, 37*, and at the same time call to mind the French *larme*. To proceed with the alphabet; the final *d* of the neuter pronouns may first be examined, as no letter is so embarrassing in Latin comedy. It may first be observed, that the letter is entirely parasitical, if we may use the word, forming no essential part of the pronouns. The pronouns *is* and *quis*, as exhibited in our grammars, are really made up of two separate declensions; and, through this confusion, appear devoid of all analogy. Thus *is, id, ibi, im* (inter-im), *ibus*, together with *quis, quid, quem, qui* (abl.), *quibus*, and perhaps *quia* (the so called conjunction), belonging to the *i* declension, like *tristis, triste*, whereas the other cases follow the analogy of *nullus, -a, -am*, or the *o* and *a* declensions, the stems being *eo, ea, quo, qua*. As the neuter rarely takes the *s*, which marks the nominative case, the stem *tristi*, according to the general practice of the Latin language, assumed the *ɛ*, as an equivalent for the faint sound of a final *i*. But before the suffix *d*, the *i* of course remained, and we have *quid, id*. That the *d* is not an essential part of these words is shown further by the neuter *idem*, derived not from *id-dem*, but *ɛ-dem*, whilst *is-dem* led to *idem*, just as *qui* followed by a consonant has the long sound, which *quis* would have in the same situation, though *quis* in itself is short. The other adjective pronouns are of the *o* declension.

The nominatives masculine in *e*, *ille*, *iste*, &c. are only in appearance at variance with this declension. Thus we really meet with *ipous*; and the suppression of the nominative sibilant exposes the unprotected short vowel to the usual fate of short final letters. The *ɔ* or *ü* is supplanted by *ɛ*. In precisely the same way we have the vocative *dominɛ* for *dominɔ*. *Illɔ*, *istɔ*, *ipsɔ*, *quɔ* would correspond to the Greek neuters *touτo*, *το*, *ὁ*, *εχεντο*, &c.; but they invariably assume some suffix, an *m*, *d*, or *c*, i. e. *ce*; becoming *ipsum*, *quom*, *quum*, or *cum* (called a conjunction), or *illud*, *istud*, *quod*; or, lastly, *illuc*, *illuc*, *istuc*, *istuc*. *Quicquam*, *quicquid*, for *quidquam*, *quidquid*, are only euphonic varieties, the *c* growing out of the following *q*.

If, then, the *d* be only an unimportant suffix, not affecting the meaning as far as we can see, it can scarcely be surprising that these little pronouns should occasionally be treated as if they had no final consonant to protect them from elision, as in—2, 1, 32 *quod ad te ad* | *tinet*—2, 2, 28, *id quod ad* | *te*—3, 3, 82, *il* | *lud ad me ad* | *tinet*—5, 1, 30, *dece* | *det quod hinc*—2, 3, 8, *quid est quid*—2, 4, 17, *quid est ob* | *secro*—4, 5, 4, *quid huic hic*—3, 2, 26, *pror* | *sus quid is* | *tic*—Andr. 1, 1, 15, *et id gra* | *tum*, &c. Thirty or forty more examples might have been quoted from the Adelphi alone.

The particle *quidem* it is difficult to analyse; but whatever be its origin, we may safely affirm that its pronunciation did not always correspond to its written form. Bentley (Andr. 1, 3, 20) considers that the *m* is to be dropped, by which he converts the word into two short syllables, as usual. This explanation, however, fails in such cases as Ad. 4, 5, 58—*quidem in te*—and after what has been said upon the letter *a*, we shall, perhaps, not err in assigning to it the power of a monosyllable, such as *quem*. Thus *siquidem* will be a spondee, *si* preserving its quantity. So *equidem* from *eg'quidem*, and *in quandoquidem quando* retains a long *o*. Indeed as *quidem* has something of an enclitic nature in it, adding force to the word immediately preceding, it is more likely to lengthen than shorten the syllable to which it is attached. May we read in Persius, 1, 110, *Littera*. *Per me quidem sint omnia protinus alba*, for *per me equidem*, &c.. which, besides being suspicious in point of latinity, deprives *me* by elision of its due power? To the instances given above (p. 349), to show that *quidem* was in some way contracted, we may add—2, 4, 4, *quidem te*—3, 2, 39, and 3, 3, 25, *quidem non*—5, 5, 1, *quidem dum*. *Edepol* or *aedepol* is another word of perhaps doubtful origin. If it be a corruption of *aedem Pollucis*,

then certainly the *d* had lost its power; and the word as spoken must have been equivalent to *epol*, which would correspond precisely to the other interjection *ecastor*. See the following passages, in all of which *epol* would be well adapted to the metre—3, 1, 2—4, 8, 1—4, 9, 8.

Another word, which appears to possess a silent *d*, is *studet*, for in 1, 1, 48, we have *studet par | referre*—and in 5, 5, 2, *student face | re*. Bentley, on the other hand, holds both *studet* and *student*, notwithstanding the following consonants, to be pyrrhics, thus creating, in the second passage, a most delightful representative of an iamb. Some, perhaps, may propose to support the Doctor's view of the case by the form of the French verb, where these very letters, *t* and *nt* of the third persons, are no longer pronounced, as *il aime* and *ils aiment*. Let it be recollected, however, that so soon as it became the invariable custom to express the pronouns *il* and *ils*, it was a useless repetition to give utterance to the final *t* and *nt*, which had exactly the same power. In Terence the case is different.

*G* is the next consonant, and no consonant is so little able to maintain its position, especially when flanked by vowels. An Englishman, ignorant of the other Teutonic languages, would be surprised if he had pointed out to him all the words in his own tongue from which this guttural has vanished. In Terence *ego*, *magis*, *digitus*, *igitur*, *agere*, and others, have a very deceitful appearance. *Ego* assumed in the old Italian the form *eo*, and afterwards that of *io*, which it still retains. In no one of the languages derived from the Latin does the guttural appear. Nay, it must have disappeared (as a sound) at a very early stage of the Latin itself, if, as seems probable, the final *o* in the first person of verbs is, in fact, the pronoun. From *magis* and *mage* the Italians have derived *mai*, the French *mais*, which appears again in *ja-mais* (*jam-magis*), the Spaniards *mas*. So *magister* has led to *maistre* and *maestro*. *Digitus*\* corresponds to *dito*

\* How much the shortened pronunciation improves the metre may be seen in the following iambic tetrameter catalectic (Eun. 2, 2, 53) :—

Qui mihi nunc uno digitulo forem aperis fortunatus.

Which certainly has not much melody. But let us abbreviate the words according to the principles already stated, observing, at the same time, that there is a strong emphasis on *mihi*, in opposition to *tu*, in the next line. The two lines will run thus :—

Qui mi nunc uno ditulo | for' ap'ri' fortunatus,  
Ne tu 'stam faxo cálibus | seep' insultabi' frústra:

And the reader will, perhaps, detect some metrical resemblance to not the most elegant of songs :

Giovánni loves good ale an' wine,  
Giovánni loves good brándy.

Italian, *doigt*, French, whilst the Greek δάχτυλος has at least undergone contraction. In Juvenal, *Strigilibus* is often produced as a specimen of a procelesumatic in dactylic verse. The French *étrille*, however, and the Italian *stregliare* may, perhaps, authorise our pronouncing the word as *strīlibus*. Again, Priscian (in the third chapter of his treatise on accents, speaking of the word *vigil*, *vigilis*) says, *magis videtur per syncopam proferri*; which seems to imply that the *g* might be silent, and, accordingly, we find *vigiles* (subj. of *vigilare*) the representative of a trochee in the same scene of the Eunuch, from which we have just quoted a line, where *vigiles* as an anapest would certainly offend the ear of any but a grammarian:—

Ne sūrsum d'orsum cūrsites, nev' usqu' ad lucem v'l'es.

The French *veiller*, and the Italian *vegliare*, confirm this. So again, *frigidus*, *freddo*, Italian, *froid*, French; *fragilis*, *frale*, Italian; *rigidus*, *roide*, French, *legere*, *lire*; *fugere*, *fuir*, French: Viginti, triginta, venti, trenta, Italian, &c., &c. That the words, *ego*, *magis*, *igitur*, certainly did suffer some contraction will appear from these references:—Ad. 2, 1, 31, Egon' de | bacchatus; 2, 1, 38, Si ego tibi il | lam, i.e. Syo ti 'l | lam; 2, 4, 4; 3, 2, 23; 5, 5, 16; 4, 7, 28, quid illā igi | tur, i. e. qu' illai | tur; 2, 3, 6, *magis* prin | cipem; 4, 5, 67, ni *magis* | te; 4, 3, 14; 4, 5, 46; 4, 5, 74. These instances of *magis* are often explained by striking off the sibilant, and thus producing so many anapests or dactyls; but the comparative of *mag(n)us*, *ma-iōr*, having itself lost the guttural, it is not unlikely that the same fate may have befallen the adverb.—See Raynouard, p. 385. With *magis* may be connected a number of other words of similar character—*minus*, *satis*, *nimis*. The first of these became in Roman *mens*, in the old Italian *men*, in French *moins*. *Satis*, in its simple form, does not appear in these languages, but from a compound *ad-satis*, they seem to have derived respectively, *assaz*, *assez*, *assai*. *Nimis*, we believe, has no modern representative. But the question, whether these three little words were in fact presented to the ear with diminished powers, must be decided by examples: 4, 3, 14, sunt miuus | secundae; 5, 7, 36, minus videtis, at the beginning of a trochaic line, where *minus* must occupy the place of two short syllables, or rather one long one; 2, 1, 30, si satis | jam; 2, 2, 31, si satis | placet; 2, 3, 3, lau | dem satis | certo; 3, 2, 11, satis quae; 3, 3, 48, satin' scis (this example seems decisive); 3, 3, 85, satis cerno; 3, 4, 13, me satis | pie; 4, 4, 14, satis diu; 4, 1, 6, nimis mise | re; 5, 1, 1, nimis sanc | tas; 1, 1, 4, evenir | e ea sati | us est.

The words, *tamen*, *enim*, *neque*, *atque*, *nisi*, perhaps *quasi*, *ita*, *quia*, *modo*, &c., belong to a class of words which are scarcely entitled to any great share of the voice. Thus we find, 1, 2, 65, *tamen vix*; 2, 1, 35, *pes | tis tamen | tibi*. So the particle *tamenetsi* is only a contracted form of *tamenetsi*; 2, 1, 47, *verum enim quando*; 2, 3, 2, *ver | um enim ver | o*; 5, 5, 24, *enim vi | di*; *Andr. 1, 3, 1, enim ve | ro*. Bentley elides the *m.* 3, 4, 13, *neque faci | am*. Without absolutely writing *nec*, we may give the same sound to *neque* (and to *atque* that of *ac*). So *nisi* may be pronounced *ni*; and, perhaps, *quasi*, *quai*. As to *quia* and *ita*, we have to guide us, 4, 2, 27. *quia inise | ram*; 1, 1, 10, *Ego quia*; 5, 1, 41, *Ita ut volu | mus*; 5, 1, 1, *Ita ut dix | i*; and from the *Andria*, 2, 3, 25, *Itan cred | is*. *Modo*, used as a particle, not having any representative in the derived languages, we must avail ourselves of the compound *quomodo*, which belongs to them all under the respective forms of—*com*, Rom., *como*, Span., *comme*, Fr., *come*, Ital. A monosyllabic form of the particle (by omission of the consonant) is well suited to the lines *Ad. 5, 1, 59, modo faci | to*; *Eun. 2, 2, 51, il | lam age modo |* and perhaps necessary in—*Andr. 2, 1, 2, modo e Dā | vo*; *Andr. 2, 4, 6, modo ut pos | sim*. The line of the *Adelphi* from which we have last quoted, has for the final iamb—*vi | dero atque |*; but then the following line begins with a vowel—*illi &c.* We are somewhat tempted to transfer the conjunction to the second line, for *atque illi* would not be a very outrageous spondee pronounced as *ac 'li*. However, this same word *atque* performs the same duty of *συναρθεία* again in 3, 3, 21, 22; and a third time in 3, 4, 19, 20.

A few stragglers must be brought up, and we shall have done. The little word *esse* (frequently no more than an enclitic) naturally admits of abbreviation as 5, 5, 8, *Id esse* for a trochee. So *erit* cannot always be pronounced in the received manner. It seems sometimes to require the sound of *er't*, just as we [find *est*, *volt*, *fert*, for *esit*, *volit*, *ferit*. That the sound of the word was in some way incomplete can scarcely admit of doubt, when we find such feet as:—*Prol. 4, se ipse erit*; *| vos eri | tis*; 2, 1, 26, *fecis | se erit meli | us*; 3, 3, 57, *sper | o erit simi | lis*. The greatest metrical difficulty in the whole play is perhaps to be found in 1, 2, 37, *amat dabi | tur*. That *dabitur* may possibly constitute a trochee we have already mentioned in treating of the letter *b*; and it is also possible that the final *t* of *amat* may not require to be sounded before a consonant so closely allied to it as *d*. But these more violent elisions,

as Bentley has pointed out, are only met with at the beginning of lines ; whilst, on the contrary, it may be observed that contractions freely allowed in the other parts of a verse are less admissible at the close of a line.

The words *apud*, *domi*; *senex*, *senectus*; *pater*, *soror*, may occasion difficulty, unless we are prepared to contract or shorten them in some way. The analogy of *père* and *sœur* seems to explain the two last ; but *domi* and *apud* cannot be illustrated in the same way. The reader may form his own opinion of them from the following references—2, 1, 44, *domo me* ; 8, 3, 35, *est domi ha | biturus* ; 3, 3, 59, *domi habu | it* ; 4, 5, 39, *domi vir | ginem* ; 4, 7, 28, *faci | as domi | erit pro | &c.* (perhaps *dom | y er't*) ; 4, 7, 28, *domus sump | tuosa* : whilst on the contrary, in 2, 4, 22, we find *dōmūm | cum obsonio*—and for *aput*, 1, 2, 74; 3, 3, 50; 3, 5, 2; 4, 1, 1; 4, 1, 19; 4, 2, 34; together with 4, 2, 44; 5, 1, 13; 5, 2, 19. With regard to *senex* and *senectus*, as they are found in 4, 8, 6, *senex nos | ter*, and 5, 1, 47, *viti | um senec | tus*, we may perhaps deduce the true explanation from the form of the genitive *senis*, or the comparative *senior*, so that the *ec* in these words should be disregarded. Thus we should have something like *Sen' nos | ter* and *viti | um sen' | tus*. It is in accordance with this that we find *senectus* as a participle of the verb *seneo*. Lastly, is the adjective *sentus*, a reduced form of *senectus* ?

It has been objected to a system of evanescent letters, to which we have referred so many of the metrical difficulties occurring in Terence, that if these words were so pronounced in one passage of an author, they must have the same power in other passages, and that letters which are not to be sounded in Terence, must be treated in the same way in Virgil. It is a sufficient answer to refer the reader to his own language ; where he will find numerous instances of words, which in one passage are pronounced fully, and in another lose a whole syllable. And secondly, those licences and contractions which are so common in the language of conversation, are not suited to the dignified and slow delivery of the tragic or epic muse. Indeed, the term *licence* is incorrect. It would, on the contrary, be a greater licence, it would be mere solemn absurdity, to pronounce distinctly every separate syllable in a common dialogue.

We have carried this article to a much greater length than we had intended ; and yet there are perhaps some few lines of the *Adelphi* left unnoticed, in which the principles we have contended for may not be found sufficient. But we must pass them over at any rate for the present. Though we

have more particularly examined one play of Terence, yet what we have said will apply to the others; and we believe that but few iambic or trochaic verses in them will occasion much difficulty to those for whom we are writing—industrious students.

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#### HARRIS'S BOOKS.

In the days of early infancy, long ere scholastic labours have infringed upon the liberty of the future student, he is surrounded by the tattered remnants of those gay pictured books, which are continually issuing from the press at the corner of St. Paul's Churchyard, for the amusement, if not for the edification, of the rising generation. ‘Harris’s books’ are, therefore, associated with the first pleasures of childhood; and ‘Dame Trot and her Cat,’ ‘The History of the House that Jack built,’ and other similar productions, notwithstanding the ‘march of intellect,’ still triumphantly retain their station in the nursery.

Although these erudite works continue to find a place in the catalogue of the above respectable publisher, and although no inconsiderable proportion of his numerous publications is devoted merely to entertaining narratives, adapted to progressive ages from infancy to youth, still amusement does not hold her reign in this juvenile library to the exclusion of more substantial and useful objects; but instruction, too, is combined with its lighter and more attractive partner.

An inspection of Mr. Harris’s catalogue cannot fail to afford satisfaction to the judicious preceptor. The design of many of the works which it contains is most excellent, and their titles induce a belief that they will prove a rich accession to the means of imparting useful knowledge. But an examination of the works themselves, conducted with every expectation of deriving profit and pleasure from their perusal, produces in us a feeling of disappointment, arising from the insufficient amount of talent which is in general displayed in their execution.

We cannot but regret that so few writers of really sound judgment and competent knowledge are led to devote their attention to this most important branch of literature. It may be that as every subject is apparently engrossed by the crowd of works which are constantly published for the benefit of young people, the modesty of real talent retires from the contest, deeming it presumption to treat on what has been

already discussed by others of supposed experience. Thus the field continues too much in the occupation of commonplace minds, who, with every disposition to do what is most rational, and most conducive to the proper instruction of youth, only contemplate things in the detail, and appear little qualified to take an adequate view of the true end of all education.

To expose the errors of conceited ignorance, or to condemn the dogmas of presumptuous prejudice, would be to some an easy and, perhaps, not altogether an unpleasing office. But to speak in any terms, save those of commendation, of works which are dictated by praiseworthy motives, is indeed an ungracious task : nor can we too gently point out those defects of style and manner, which only render information thus clothed less attractive, and, therefore, less useful ; reserving our graver disapprobation for that inability which gives imperfect and confused ideas of a subject, and bestowing our severest censure only on those faults which would instil false and pernicious notions into the tender mind.

An attempt \* has been made in a former number to show how materially history may, by an able writer, be made to assist in the formation of character, by offering to the contemplation of youth a comprehensive view of human nature, and of the motives which should actuate man in his journey through life ; thus inciting to all that is great and good, and tending to exalt the character by purifying the heart.

Several histories of our own country appear in the catalogue now before us ; but in vain we seek in them for those enlarged views and that impartial narrative which are so essential to the usefulness of historical works, and without which they must, in fact, be pernicious.

One is at a loss to conceive why so meagre a performance as the History of England, by the Rev. Mr. Cooper, should be in so great request as to have reached the twenty-first edition—a result which we should only have thought probable in the absence of all other historical notices of this kingdom.

In this work the two last reigns, those of George the Third and Fourth, occupy more than half the volume. Two or three pages are all that are usually allotted to each of the preceding reigns, and nearly a third of this small space is engrossed in summing up the character and personal endowments of the prince, whose good or bad qualities cannot be in the least deduced from the short list of events by which their enumeration is preceded ; the pupil is therefore taught to believe, on

\* Second Number, Art. ' Darton and Harvey's books.'

the authority of the Rev. Mr. Cooper alone, without any facts being brought forward in support of the assertion, that one prince was ‘brutally cruel and vindictive, perfidious, lewd, perjured, and rapacious’—p. 49; that another was ‘temperate, modest, and devout;’ and that a third was ‘courteous, affable, and eloquent.’ Should not an author consider it rather a responsible office thus to impress on the youthful mind a bias, which, perhaps, no after perusal of history may totally eradicate?

The character of Charles the Second, that personification of all that is vicious in man, and despicable in royalty, is thus laid down, without one action of Charles being recorded to exemplify a single attribute with which he is here invested:

‘Charles the Second was in his person tall and swarthy; and his countenance was marked with strong, harsh lineaments. His penetration was keen, his judgment clear, his understanding extensive, his conversation lively and entertaining, and he possessed the talent of wit and ridicule. He was easy of access, polite, and affable. Had he been limited to a private station, he would have passed for the most agreeable and best natured man of the age in which he lived. His greatest enemies allow him to have been a civil husband, an affectionate father, and an indulgent master; even as a prince, he manifested an aversion to cruelty and injustice. Yet these good qualities were more than overbalanced by his weakness and defects. He was a scoffer at religion and a libertine in his morals; careless, indolent, profuse, abandoned to effeminate pleasure, incapable of any noble enterprise, a stranger to manly friendship and gratitude, deaf to the voice of honour, blind to the allurements of glory, and, in a word, wholly destitute of every active virtue.’—p. 88.

Are children, then, to be told that the dark shades of the picture are only *weakness* and *defects*? What right-feeling parents would not turn from the temporising historian with indignant warmth, and endeavour to shield their children from the benumbing influence of worldly precept, by giving to vice and hypocrisy their right names?

Wolsey, who made so conspicuous a figure in the reign of Henry the Eighth, is here mentioned but twice, and then only incidentally. We are told that by his ‘assistance, Henry, in 1533, divorced Catherine of Arragon.’ Now this is quite a new version of the fact, as all authorities extant are, we believe, agreed, that to Wolsey’s vacillating conduct in that affair, his own ruin must be ascribed.

In the concluding reigns, impartiality and moderation are attempted, but the anti-catholic spirit of the author too plainly, and on more than one occasion, is exhibited. In speaking of the ministry of Mr. Canning, the historian thus remarks:—

'The admission of the Roman Catholics into power was the price of their support; and all true Protestants saw with horror, that their rights were about to be compromised.'—p. 229.

The table of remarkable events appended to each reign is a very useful addition to this history.

The History of England, by Mrs. Helme, has already reached the seventh edition, and is much used in establishments for the education of young ladies. The style and machinery of this work cannot be commended. The conversations of the young people are stiff and unnatural, so that children who are accustomed to form their own opinion of what they read, are at the very commencement irresistibly impelled to ridicule the formal little folks, and are therefore disqualified from going into the matter of the history with feelings of much respect for the author. The observations of the children are merely interruptions, having nothing original to recommend them, and only serving to elicit a common-place remark, while occasions for moralising are dragged forward in a manner almost ludicrous. In the reign of Alfred, the conduct of the cow-herd's wife affords an opportunity for inculcating good manners. 'Grossness of manners,' said Mrs. Wilmot, 'ought to be carefully guarded against, for the most handsome person, or the most learned, without the necessary knowledge of what is due to the customs of society, appears disgusting; but when united, they render the possessor doubly estimable, and his or her company eagerly sought after.'—p. 21.

On the other hand, not only are legitimate occasions for enforcing moral lessons frequently disregarded, but sometimes indeed those actions are excused, which should call forth the pointed disapprobation of every well principled mind. The attack made on Copenhagen, by the British fleet in 1807, is thus commented upon by this historian for youth :—

'Though, on a superficial view, this measure may appear harsh, and the humane heart revolt when it contemplates the miseries of unoffending individuals; yet when it is considered, that no barbarous thirst for revenge, nor wild ambitious scheme of aggrandizement, prompted the action, but, on the contrary, that it most assuredly was planned as a preventive for greater evils; then, while we cannot restrain the tear of pity, we must needs say, that nought but folly or faction could arraign its wisdom.'—p. 318.

Buonaparte, of course, falls under the unmitigated displeasure of this lady, and invention is exhausted in applying epithets. 'The infuriate usurper'—'recreant ex-emperor'—'daring re-

bel,' and other similar vituperative titles, might induce a belief that the fair author had, to supply her own deficiency in a not very feminine accomplishment, borrowed a page from a work which made some noise in its day, under the title of 'Cursing Made Easy, by Dr. Slop.' The term *radical* is luminously explained, as being applicable to a man who wishes for 'annual parliaments, universal suffrage, and election by ballot.' Is it probable, that any one of these wishes, thus expressed, can be understood by a child? There remains, however, a much graver objection to this book than the want of a clear exposition of the term *radical*, which perhaps had been better altogether omitted, as being a ridiculous epithet used in the temporary excitement of party feeling.

In the reign of the vicious Henry the Eighth, events and accusations are noticed, which an historian, and more especially a female historian, writing for the benefit of youth, should have entirely passed over in silence. They are alike offensive to decency and morality, and every careful mother would avoid placing any book, in which the slightest allusion is made to them, in the hands of her children.

This objection applies with tenfold force to Dymock's Abridgment of Goldsmith's History, rendering it, independent of other glaring faults with which it abounds, a most improper book to be employed for the purposes of education. In other respects, neither the manner nor matter of this work can be approved; it is not only written in a bad style, but with a strong party spirit, by which every fact is distorted. Better would it be that children should remain wholly ignorant of the history of their country, than that they should obtain an acquaintance with it through such a medium.

When we find that the volume before us is a standard school-book, ranking, together with the two just noticed, among works of such extensive sale, as to be printed for the joint advantage of some of the most respectable publishers in London, we feel yet more forcibly how requisite it is, that parents should be aware of the contents of books which are used in forming the minds of their children.

The latter part of the history must of course be wholly attributed to Mr. Dymock, and for *this* he is therefore more peculiarly answerable. Characters, whose political opinions are at variance with his own, are generally noticed with contempt or vituperation. He thus notices that act of the Lord Mayor Beckford, for which his fellow citizens caused his statue to be erected in their Guildhall, with that intrepid rejoinder inscribed on its base, which, contrary indeed to

courtly etiquette, but with so much manliness and propriety, he returned to the ungracious reply of the king :—

‘ At the prorogation of Parliament, the city of London petitioned for a change of ministry, and the royal answer not being satisfactory, one Beckford, then Lord Mayor, had the audacity to give a personal reproof to his Sovereign, for listening to what he rudely called unconstitutional counsel. The Monarch, in silent indignation, heard the reproof of this insolent citizen, who had amassed great wealth as a West India planter, of which his arrogance was probably the spawn, conjoined with ignorance of what was due to the august personage, in whose presence he had the honour to stand.’—p. 318.

That enlightened statesman, the late Mr. Whitbread, who occupied so distinguished a station in the parliamentary history of this country, during a long and eventful period, has his character flippantly dismissed in the following paragraph :—

‘ The trial of Lord Melville commenced on the 29th of April, in Westminster Hall, and was conducted on the part of the Commons of Britain, by Mr. Samuel Whitbread, a brewer in London, who framed the articles of impeachment, ten in number, injudiciously. The superabundance of his zeal formed but a poor compensation for want of precision and judgment. To aggravate the guilt of the defendant, as Whitbread vainly imagined, he frequently introduced the same charge in different articles; and not to render the articles too numerous, he huddled together different charges in the same article. These errors and defects, the result of a feeble understanding, and of acrimonious violence, would have operated in favour of the noble lord.’—p. 400.

Examples of this kind might be multiplied, but these are perhaps sufficient to prove the gross partiality shown in this work. Stronger objections exist against the fitness of this volume for occupying the minds of children. That event, which, in the last reign, cast so black a shade over the domestic history of royalty, and which was so revolting in its detail, that all allusion to it should have been studiously withheld in a work for juvenile readers, is here made a subject of free discussion. Some of the questions, placed at the end of the work, to which the pupils are expected to furnish answers from their recollection of the text, will sufficiently show the nature of the information which is to be instilled into the youthful mind :—

‘ In what year did a separation take place between the prince and princess of Wales? Why were commissioners appointed to examine into her conduct, and in what year? What was the report of the commissioners? In what year had a previous inquiry taken place, and by what name was it called? Who merited blame for the letters which the princess wrote to their majesties and others?

When did parliament vote her 35,000*l.* a-year? What followed? Where did she at last settle? What annual sum did the ministry offer to prevent her return to Britain? Did she accept that proposal? How was she received by the populace in London? What measure did her arrival in Britain render inevitable? Relate her trial and her conduct at the coronation. By whom was she now deserted? Respecting what did she form an erroneous opinion? What would a little penetration have discovered? What did her friends regret? By whom were addresses forwarded to the sovereign? In what respect did the opinions of the uninformed part of the public and of the higher circles differ? Were the declarations and conduct of the whigs consistent? Who advised the suppression of the queen's name in the liturgy? What sum a-year did the premier propose to allow her? What declaration did she and her legal adviser, Mr. Brougham, make with respect to it? By what act did she give the lie to these declarations? When did she die? What happened at her funeral before she left London? Who now rose in the esteem of the nation?—p. 491.

Who would wish their children, by qualifying themselves for answering these questions, to be initiated into such kinds of knowledge—to be familiarized with subjects whose tendency is at once so depraving and so humiliating to human nature?

A work entitled ‘True Stories from English History,’ is not executed with great ability, but with such an evident disposition to be useful, and with so much amiable feeling, that it is impossible to mention the errors which are to be found in this book, with any intention save that of pointing them out for future correction.

In the reign of Edward the Second we find this passage:—

‘All was now turbulence; some of the nobles took up arms; the king's *mother*, Isabella, joined against him.’

Again—

‘His *mother* then summoned a council at Westminster, by which her *son* was deposed, her *grandson* chosen for the new king, and she herself made regent or governor of England.

‘This is a sad history of female ambition and cruelty. To the honour of woman be it said, there are few such women, still fewer such *mothers* as Isabella.’—p. 75.

From what cause could this strange mistake arise? If the word *mother* instead of *wife* occurred but once, we might suppose it to be an error of the press, but as it is repeated, a different reason must be sought for the mis-statement.

The author of this work is not, perhaps, sufficiently acquainted with leading events, as related by writers of opposite opinions; and although it is certainly not necessary that an historian who writes for the information of youth

should be a profound politician, it is surely not right to give unmeasured praise to a line of policy of which no explanation or description is attempted, and which, in the present day, is somewhat more than questioned :—

‘ Were success always attendant on merit, or proportionate to desert, Mr. Pitt would have placed England at the pinnacle of happiness and fame. But, to the irreparable loss of his country, he died, ere all his plans were completed, or all his wishes realized.’—p. 206.

Much chit-chat information has been gleaned by this indefatigable writer, but it is so heterogeneous and so ill arranged, that the reader is at a loss to imagine by what rule such different kinds of notices were inserted in their present respective situations. One passage appended to, but certainly not belonging to, the reign of Edward the Fourth, will suffice to exemplify this observation. Immediately after observing that the art of printing had been recently invented, the author thus continues :—

‘ The cruel sport of spinning cock-chafers was common among the ancient Greeks. Aristophanes speaks of it in his curious comedy, “ *The Clouds*. ” The Grecian boys were less cruel than ours, for, instead of thrusting a pin through the poor insect, they only bound a thread about its legs. These may-flies are a kind of beetle found among the flowers of hemlock ; and no doubt many children play with them from ignorance of the sufferings they cause. Every body should take all opportunities of explaining to the young that it is the cruel torture which the chaser suffers that causes its flutterings and writhings. Surely no child understanding this would ever again torment this unoffending insect.

‘ The paper kite obtained its name, perhaps, from having originally been made somewhat in the shape of that bird. This was an ancient pastime, and was known in China in very early times. The *cerf volant* is named in a French dictionary of A.D. 1690.

‘ The Grecian children were very fond of blind-man’s-buff, anciently called in England hood-man-blind, from the persons being blinded by the hoods then generally worn.’—p. 115.

The same author has likewise written ‘ True Stories from Ancient History,’ a work which has already reached the sixth edition. This book has the same faults of style as the preceding ; it is in some parts colloquial, approaching to vulgarity. For example—

‘ Codrus went in disguise into the enemy’s camp, and picked a quarrel with one of the soldiers.’—p. 31.

‘ By the by, this is the most ancient treaty recorded in history.’—p. 33.

Comments made on events and characters are chiefly interjectional and parenthetical, and we might add are, per-

haps, sometimes rather absurd. After detailing that strange story of Seleucus resigning his own wife to be the bride of his son Antiochus—a proof of paternal love certainly not at all in unison with modern feelings and manners—the narrative concludes with the exclamation, ‘What will not parents sacrifice for their children !’ Again—

‘ Catiline, envying and hating Cicero (how inseparable are envy and hatred!) resolved to dispatch him as a first step towards advancement.’—‘ Each of the Triumviri consented (to his shame !) to sacrifice his best friend.’

These are, however, only faults of manner, and this writer certainly has claims upon the attention of youth, into whose hands her books may be placed, at least, with safety. The following extract evinces just sentiments :

‘ Here I must request you to reflect on the degree of reliance that is to be placed on all historical accounts. \* \* \* \* \* I press this upon your attention, because I would not have you hastily believe improbable and extraordinary incidents ; because I would not have you indiscriminately credit those hideous stories of vice and cruelty so frequently detailed. When we hear of wicked tyrants, whilst we hate the crimes laid to their charge, let us remember that it is possible those crimes were never committed by them \* \* \* \*.—p. 278.

‘ True Stories from Modern History,’ by the author of the two preceding volumes, are characterised by the like peculiarities. In this work each of the sovereigns of England again forms the subject of a separate story. The writer is not happy in her explanation of the English constitution. The parliament is here described as

‘ An assembly consisting of three estates ; that is, the lords temporal (dukes and earls, &c.) ; the lords spiritual (archbishops and bishops) ; and the commons or gentlemen. The king is deemed the head of all, and sits on a throne in the House of Lords.’—p. 86.

We had marked out several passages illustrative of the feebleness of style which is conspicuous in this lady’s works, but cannot allow ourselves space for further extracts.

A small volume, entitled ‘ Stories from the History of France,’ is well arranged, and well calculated to catch the attention of very young readers. The story of ‘ The Prisoner of the Bastile ’ is so naturally told as to be painfully interesting. Perhaps the writer is somewhat too partial to royalty, and would give too wide a scope to the political maxim that kings can do no wrong.

Some simple account of the history of Ireland has long been a desideratum in the historical branch of education. The

pupil has hitherto received only vague and confused notions of the progress of that interesting and unfortunate country; which have been gleaned from the pages of English history, where facts relating to the Sister Kingdom are too often distorted by party spirit, or religious prejudice. This void is at length filled by a small work entitled 'Outlines of Irish History,' wherein events are impartially narrated in a clear and simple manner. The writer is no partisan; and while he freely comments on the injustice of fettering Catholics with disqualifications on account of religious opinions, he speaks without reserve of the cruelties and lawless conduct of the rebels.

In no branch of education has so marked an improvement taken place as in that which relates to geography. The method of indicating the situations of places, by the aid of blank maps, affords one certain criterion of the progress of the pupil, provided the nature of a map be well understood by him; and if this plan of instruction be adopted, scarcely more is wanted to assist an intelligent preceptor in teaching the position of places than two good sets of maps, corresponding with each other in every respect, except that the one has the different parts merely outlined, while the other has the names of places inserted.

The Abbé Gaultier has furnished a most elaborate work on the above plan, and has invested it with attractions, which give to this mode of acquiring geographical information, the appearance rather of an amusement than of a study. This knowledge is impressed on the mind by means of a game in which many pupils may at the same time be advantageously engaged.

The first part of the work consists of numerous questions with their answers, which are numbered and divided into lessons. An atlas, with two sets of maps, as above described, is subjoined. Boxes of counters are provided, having a question written on each counter, and a number corresponding to that of a similar question in the book. When the pupils, after reading any particular lessons, and consulting the maps with attention, are supposed to have become sufficiently acquainted with the answers, the counters which have reference to these lessons are placed in a bag, whence they are drawn at hazard by the scholars in rotation. If a correct reply be given to a question, and the situation of the place to which it relates be indicated on the blank map, the pupil is rewarded by receiving a certain number of plain counters; but if he fail to give a satisfactory answer, he is obliged to pay in the same coin for the information supplied either by one of the

other pupils, or by the instructor himself. He who, at the end of the game, possesses the greatest number of counters, is entitled to certain privileges and honours in the succeeding game. Thus all are on the alert; and the ready memories and quick eyes of the youthful players are soon successfully exerted.

To the first part of this work unqualified praise can be given; but the second part is not perhaps so free from objection. This consists of a concise treatise on the artificial sphere; but the definitions are not, we think, clearly given, and the problems are shown without any attempt at explanation. The eighth definition is particularly obscure:

'A circle in general is a curved line, called the circumference, returning upon itself with a point in the middle, called *the centre*.'—p. 25.

To discover what this really means requires a previous knowledge of the nature of a circle.

The third part contains numerous

'Geographical questions in the manner of a game, for enabling THE PUPILS to find out a place by means of its CHARACTERISTIC OR DISTINGUISHING MARKS, designed to excite a recollection of what he has learnt of geography and history, by making him reason, combine, and reflect on it, and, by thus enlarging his MIND, to accustom him early to the ready application and exercise of his judgment.'—p. 30.

This is an excellent idea, and may be pursued to a certain extent with great advantage; but the plan appears too diffuse. The whole is divided into twenty-four sections, containing all together two thousand three hundred and fifty-eight questions. Some of these are perhaps frivolous, and others not at all useful, and are therefore calculated, in the hands of an injudicious teacher, to give that superficial knowledge which engenders pedantry, and which too often usurps the place of more solid attainments. A selection from the questions might, however, prove a valuable addition to the means of rational instruction.

A 'Familiar Introduction to Geography,' by the same author, is recommended by him as an initiatory book on the subject. We do not, however, think the work sufficiently simple for this purpose, as even some of the definitions may, perhaps, be found too abstruse. The general division of the earth is thus explained:

'The constituent parts of the earth are *land* and *water*, which form a spherical or globular body, the circumference of which is computed to be about twenty-five thousand miles.'—p. 4.

Now there are at least four of these terms which a child, when he first begins his geographical studies, cannot be expected to understand. This is the besetting fault of most books of geography avowedly written for the use of children. 'Geography for Children,' translated from the French of Abbé Lenglet du Fresnoy, is liable to the same objection. The second question is, 'What are the chief constituent parts of the globe?' The information in this latter work is, however, in general given in a plain and simple manner. The method of acquiring geography, by studying the map as here recommended to grown up students, may be likewise advantageously pursued in the tuition of children; it is surely a much more rational mode to become thus acquainted with the answers than to learn them by rote.

A very prevalent plan in most elementary works on geography is to give a concise character of each nation at the end of the description of their country; this has always appeared to us as rather bordering on the ludicrous, and as being a custom better honoured in the breach than in the observance. National prejudices come in general soon enough without being awakened thus early by unfounded and arbitrary distinctions.

The work before us is faulty in omitting some information, and in giving incorrect statements on other points. Demerara and Berbice, which form so large a portion of Guiana, are not noticed. The Greek islands (1829) are still represented as being under the Turkish sway, and St. Lucia and Tobago are included among French possessions. But the particulars of different countries and of the English counties especially, which are contained in the notes, will be found very useful. The latter part, on the use of the globes, we consider deficient, inasmuch as the pupils are directed blindfold, without any attempt being made at explanation.

A small volume, entitled 'Astronomical Conversations for Children,' is recommended by the excellent and simple nature of its explanations, whereby, without the use of any terms with which a child is supposed to be unacquainted, the globular shape of the earth is satisfactorily proved, the cause of the variation of the seasons is simply shown, and a clear and well defined idea is given of the whole of the solar system. This book contains some very useful and well executed diagrams, which essentially assist in giving an accurate idea of the relative magnitudes of the planets, and of the respective distances of their satellites.

'The Little Traveller,' the subject of which is a general and particular description of the world, is a well designed,

but not equally well executed work. The attempt at explaining the astronomical part is so confused and obscure, that it makes us appreciate still more the lucid manner adopted in the little work which has just been mentioned.

'Scenes in Europe, Asia, Africa, and America,' each division forming a separate volume, have the same purport as the preceding book, but they are of a more lively cast. These, as well as scenes in England, are written by the Rev. Isaac Taylor of Ongar, a most indefatigable and zealous labourer for the juvenile library, all whose works have been uniformly received with so much favour by the public as speedily to pass through many editions.

Where the conception appears so judicious, it is to be regretted that more skill in style and manner has not been displayed. The volumes before us contain some amusing information; but they are executed with so little taste and talent, that it is matter of some surprise how they should have obtained so much favour.

The attempts at versification are for the most part such grotesque failures, that they certainly are not calculated to awaken or to foster in the youthful reader a correct taste for the beauties of poetry. To illustrate what we have advanced, it may, perhaps, be right to give one or two short extracts, taken almost indiscriminately from some of the volumes:

' Yet to send my dear wife and my daughters away  
 When a friend comes to see me, I think rather rude;  
 Unless they were slatterns, or would not be good,  
 I'd rather, in such a case, tell them to stay,  
 Since female society, temperate and gay,  
 Would heighten our converse, like spice to our food.'

*Scenes in Asia, p. 93.*

'FORSAKING FRIENDS IN DISTRESS.

'When any one, even a woman, is in danger of being drowned, they do not try to help her, but are so terrified that they all run away, or perhaps even throw stones at her to kill her outright.

I.

'A friend in need 'S a friend indeed ; But there's a pretty fellow,      Who, when his wife Must lose her life, Can only run and bellow.	'A man of heart Would act a part, I think, the just contrary ; If she splashed in He would not grin, But say, "I'll help thee, Mary."
--	--

II.

'That man's no man  
 Whoever can  
 In danger fly,—inhuman !

III.

I'd yield my help  
To boy or whelp,  
Much more would I to woman.'

*Scenes in Africa*, 4th edit. p. 83.

We forbear all reference to the other volumes for further extracts; enough has been shown, we think, to excite astonishment that these works should find a place on the same shelf with volumes which bear the name of Aikin, Edgeworth, or Hack.

Mr. Taylor has likewise written 'Scenes of British Wealth' and 'Scenes of Commerce, or where does it come from?' The latter is a good idea; and as the author does not here indulge in his poetic vein, the work is of a superior cast to those from which the preceding extracts have been taken. Great want of judgment is, however, shown in the mechanism and arrangement; too much heterogeneous information is crowded into a small space, and the puerile prelude to some of the explanations is often out of all proportion longer than the explanation itself. The latter half of the volume does not answer to its title, and therefore it would perhaps have been more advantageous in every respect if this portion had formed a separate work. When numerous subjects are treated of in one volume, children become confused or fatigued with the multiplicity, and do not retain clear ideas of what they read. The descriptions given in this book of various processes are not particularly well explained, while the incorrectness of style renders the account still more confused. The explanation of the manner of conducting the process of distillation, at p. 68, is liable to this objection.

A familiar, gossiping style is often adopted by writers for children, but no small degree of skill is required to prevent this from degenerating into vulgarity. The style of the volume now under notice is not exempt from this defect. At page 129 we find the following passage:—

'Servants who obtain their ladies' cast off dresses think themselves fine when thus bedizened, and many girls in middle life, whose accompaniments are not of a piece with such an article of finery, flaunt away half their pocket-money on their heads.'

Again:—

'We export our own chintz more than we receive by great odds.'  
—p. 157.

Many other examples might be quoted, but we forbear, and proceed to notice slightly some of the other works of the same author.

'The Mine' and 'The Ship,' forming the two first volumes of a series entitled 'The Little Library,' are likewise the

productions of the Rev. Isaac Taylor. These partake of the same good and bad qualities which characterize all the works of this gentleman—good in design, but faulty in execution. A vast stock of information is amassed, but it is not put forth in an attractive form, while it would be impossible to understand some of the descriptions without being previously acquainted with subjects treated in so vague and confused a manner. For example :—

‘ In many places there are waters in smaller or larger pools. These are fully impregnated with particles of pure copper ; indeed, the purest copper is obtained from these waters. James was eager to see how this was done, and found that the water is pumped up into pits made on purpose for this operation. Then plates and pieces of iron are placed in them and left. The acid which had dissolved the copper, and holds it in solution, having a stronger desire for iron (a stronger affinity chemists call it), seizes on it, and lets go the infinitely small particles of copper, which instantly fasten themselves on the iron. But the iron itself is soon dissolved by the acid and falls down in a yellowish powder, leaving the copper in its place, and in exactly the same shape as the iron in whose room it has been deposited, so that the common people say and believe the iron has been changed into copper. Sometimes they take these pieces of iron out of the water and carefully scrape the copper off them.’—p. 72.

Here is a mysterious conjuration, said to be effected by ‘the acid,’ to which the reader has not the slightest introduction till it is brought forward to perform so conspicuous a part ; but all powerful as this agent is, it certainly has not the wonderful property, in the act of passing into combination from one metal to the other, of causing the copper to assume the same form as that of those pieces of iron previous to their solution, which after being here described as dissolved, are afterwards said to be sometimes taken out of the water and scraped. The same objection of want of perspicuity is found at p. 84, in the description of the manner of feeding the smelting furnace, and at p. 86 in the account of a blast furnace.

Influenced by the desire of treating difficult subjects in a plain and familiar manner, the author is sometimes led, for the sake of illustration, to make use of homely similes, which unfortunately, however, are not recommended even by the faintest resemblance. At p. 187, we find this passage.

‘ Since philosophic men have given due consideration to the structure of the earth, so as to form geology into a science, it is perceived that the surface, if it may be so called, to as great a depth as man has been able to penetrate, is composed of layers or strata of different substances placed one over another, like the flakes of a good

pie-crust; and if it were a plum pie, the bumps in it would represent the hills and mountains..... Now let us suppose, that by Betty's carelessness a flat iron or something as heavy, had fallen upon the pie-crust above supposed, and had broken it down in some places, and forced it up in others. The flakiness of the crust would still continue, though the parts which once joined would be now widely separated. This then would much resemble the crust of our earth.'—pp. 187, 188.

After reading this, let not the little lovers of plum pie fancy, while they are demolishing its fragile and homogeneous surface, that they are becoming better acquainted with the internal structure of the earth. There could not, in every respect, be a more inapplicable comparison.

'The Forest,' by Mr. Jeffreys Taylor, is another volume of the Little Library, in design and manner very similar to the foregoing. The information which has been collected is not well arranged, the mode of introducing it is perhaps forced, and the descriptions given are not sufficiently lucid. We have not space for more than one short extract from this volume, which will afford an example of the latter defect.

'A pine tree is a sort of cask of turpentine, which may be tapped in any of the summer months.... Turpentine when reduced to dryness, leaves *resin*; but when violently stirred as it boils with water, it forms *white* or *yellow resin*.'—p. 67.

'Parlour Commentaries on the Constitution and Laws of England,' by the same author, is written with so much good humour, and the desire of imparting knowledge in a pleasing form is so apparent throughout, that we cannot any longer pursue the ungrateful task of pointing out faults in manner, and will forbear from offering examples from a work which is perhaps sufficiently open to verbal criticism.

We turn with pleasure to another volume of the Little Library, entitled 'The Garden,' to which we can give a higher degree of praise, than we have been able to offer to any which have preceded it in the same series. The pursuits connected with a garden afford to young people healthful exercise, and rational amusement; and while serving as a seasonable relief from more sedentary, and more serious occupations, they engender a love of nature, and foster a taste for simple and pure pleasures, in preference to those artificial and adventitious excitements of society, which too often lead the mind to frivolity or vice. The proper degree of consequence which should be attached to this pleasing employment is well defined in the small volume before us.

\* I have several times, I think, in my letters alluded to the useful-

ness of gardening, as an amusement in inculcating a love of industry, order, and neatness ; but I trust you will forgive my repeating what I remember to have said before, that I never wished to persuade you that it is the most important of occupations. I could quote what many great, and what is more, many good men have said with respect to gardening, as an amusement fitted for good men. I shall, when I see you, tell you some stories of the love of great men for the pursuit itself. One of the greatest that ever lived in England, I mean Lord Bacon, loved and pursued gardening with delight, and in its pursuit made some of the experiments, and learned that habit of examination which has made him celebrated in every age.'

—p. 159.

The youthful labourers in the gardens are generally very fluctuating in their industry : having no well defined end in view, they want method in their exertions ; it is therefore very desirable that they should have some familiar manual to which they may refer. This little book is calculated not only to impart a love for gardening, but at the same time to afford ample means of following the pursuit with interest and advantage. Good practical directions are here given, in a manner peculiarly adapted to excite the attention, and rouse the active imitation of the young reader. The information is conveyed in a juvenile correspondence so naturally sustained, as to induce the conviction, that the advice in each particular case must be the result of personal experience.

Among the publications which fall within the present inquiry, biography has not been neglected as a means of instruction, as well as of amusement. The Rev. Isaac Taylor has largely contributed to the stock of juvenile works in this department of literature, in three volumes of European, and two of British biography, containing collectively the lives of two hundred celebrated characters. These are written impartially, but are not set off by the graces of style and manner. We have, however, already given our opinion at large on this gentleman's writings, and will not dwell more particularly on the present volumes.

Our attention is now claimed by another work, entitled 'Triumphs of Genius and Perseverance, by Elizabeth Strutt.' This volume has considerable merit ; the characters whose histories are here told, as well as the incidents by which they are illustrated, are admirably selected. The style is perhaps occasionally rather involved and careless, but these are defects of little moment, which are entirely lost in the interest excited by the different narratives.

The unabated energy with which men of high intellectual endowments, unappalled by circumstances apparently the most unpromising, and difficulties the most disheartening, have still

struggled onwards in their pursuit of knowledge, is here well pourtrayed. The perusal must surely, for a brief space at least, rouse to attention the most dormant mind, while it must cause the same chord to vibrate in a kindred spirit, inciting him on to renewed exertions in the rich territory of intellect. The author in her preface observes most truly that

‘There is no situation in life so high that must not, after all, owe its purest enjoyments to feelings with which mind is connected ; there is none so low which may not be cheered and refined from the same source. Independent of all worldly considerations, mental pursuits invariably bestow a rich reward on their votary in the delight attendant on their cultivation, and the temporary oblivion at least of all anxious cares in the abstraction they require.’—p. viii.

Connected accounts of voyages or travels form the subjects of comparatively but few among the numerous books of Harris with which we are surrounded.

We have read with pleasure a volume entitled ‘Fruits of Enterprise exhibited in the Travels of Belzoni in Egypt.’ This is very superior to a mere abridgment. All that is calculated to attract and please the youthful reader in the larger work is here happily condensed and blended, in the most appropriate language, with natural and sensible remarks. This book is of that description which is most desirable to be put into the hands of the young in the hours allotted to their amusement.

‘The Adventures of Don Ulloa in a Voyage to Calicut, soon after the discovery of India by Vasco de Gama,’ will not, perhaps, be considered by some parents quite so unexceptionable. In many parts it may be thought almost too exciting, as the reader is, by the skill of the narrator, carried on in breathless agitation. The work no doubt contains a faithful picture of the manners and customs of the various tribes which the hero is supposed to have visited, while these are not tamely described, but are rather exhibited in scenes arising out of events, which are so vividly depicted, that the author appears as an actor in what is passing, rather than as a narrator of what has passed. This is powerful writing ; but the grave instructor would, perhaps, consider it better qualified to delight the fancy of maturer age. One episode is decidedly objectionable, partaking too much of the nature of a Spanish romance, while the character, whose history it forms, is made in the sequel most inconsistently wicked. The whole, however, is told with such an air of reality, that, most surprising as the adventures are, the reader cannot refrain from thinking that they could not have been so well described if they had not really happened.

## MISCELLANEOUS.

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### FOREIGN.

#### FRANCE.

**EDUCATION IN FRANCE.**—The following facts convey an accurate, but not very cheering view of the intellectual state of the lower classes among our French neighbours. The whole number of individuals, whose age rendered them liable to the conscription law in 1830, was 294,975. Of these there were 121,079 who could read and write; 12,801 who could only read; 153,635 who could neither read nor write; and 7460 with respect to whom it could not be ascertained what was the extent of their attainments. It appears that the schoolmaster has been most successfully at work in the following eight departments:—Out of every thousand young persons, there have been educated, in the Lower Rhine, 164; Seine, 194; Upper Marne, 204; Jura, 209; Upper Alps, 221; Upper Rhine, 229; Upper Saone, 255; and Marne, 254. The reverse of this picture is to be found in the following eight departments:—Out of every thousand young persons, there are wholly uneducated in the Allier, 868; Cher, 821; Finisterre, 794; Morbihan, 791; Dordogne, 780; Nièvre, 774; Côtes du Nord, 761; and Vienne, 729.

**CHATILLON ON THE SEINE, JULY 28.**—The students of the Royal College, in this town, in anticipation of the approaching distribution of prizes, have solicited a crown of laurel, in lieu of the 250 francs which the town annually assigns for the purchase of books, and which sum they request may be remitted to Poland, for the relief of the sick and wounded patriots. The town authorities, we understand, have directed the money to be accordingly paid over to the Polish Committee in Paris.

#### GERMANY.

**UNIVERSITY OF GOTTINGEN.**—Notwithstanding the political disturbances which broke in upon the progress of our academical labours early in the year, we have at this moment (31st May) 920 students within our walls; and they are thus classed:—

Students in Divinity,	235	.	Natives,	177	.	Foreigners,	58
" Jurisprudence,	354	.	"	204	.	"	150
" Medicine,	206	.	"	128	.	"	78
" Philosophy, &c.	125	.	"	162	.	"	63

**HEIDELBERG.**—It has been asserted, on one occasion, by Professor Schütz, that since the wholesale expulsions in 1828, the number of students has declined to 300; and, on another, in a recent anonymous pamphlet, published at Spires, that last summer it amounted to 600 only. But we have the contradiction under our eyes: the official enumeration, which was brought out in the beginning of June last, affords the following result. The actual number of students is 923; of whom 247 are subjects of the Grand

Duchy of Baden, and 676 are from foreign parts. The respective faculties to which they are attached are—Theology, 71; Law, 499; Medicine, Surgery, and Pharmacy, 250; Rural Economy, &c., 69; Philology and Philosophy, 34;—total, 923. This return is exclusive of those who are studying the lower branches of surgery. During the winter term, the number was 887.

MUNICH.—There are, during the present academical year, 1,915 students entered for the several courses at this University: 1,702 are Bavarians, and 213 from foreign countries. The number studying divinity, is 493; jurisprudence, 585; political and agricultural economy, 57; physic, 234; pharmacy, 41; and philosophy, 505.—*Munich, 20th July.*

RELIGIOUS OPINION IN THE UNIVERSITY OF MUNICH.—The celebrated Görres, one of the professors in this University, in the course of his preface to the life and writings of Henry Suso, alias Amandus, maintains that St. François d'Assise really hovered in the air on several occasions, and that Thomas of Aquinas did the same thing; moreover, that Lydwidt, the Dutch saint, made a journey into Palestine without quitting her couch; that St. Catherine of Genoa had her incomparable stomach sewn up like a boot, in order that she might fast for forty days; and that when St. John of Alcantara was caught up in an ecstacy during a snow storm, the falling element formed a hanging canopy over his head. Whatever may be predicated of the professor's talents and fame, one thing at least is unquestionable—that his youthful auditory are not likely to fall asleep over his prelections for lack of amusement.

BOHEMIA.—There are twenty-five Gymnasia (or high schools) in this country; seventeen of them are wholly in the hands of the Catholic clergy, and Catholic teachers predominate in the remainder. In these schools so sorely is the scholar vexed with a superabundance of ecclesiastical mummeries, even to the very extortions of the confessional, that it is rare for him to look back upon his scholastic career without a sentiment of loathing. Private tuition is mostly confined to the same agency, and the fruits are the same as in the former instance—lamentably conducive to the spread of religious indifference. Though Prague still boasts her thirteen monasteries and nunneries, the influence of their members lives but in the remembrance of a bygone age: in fact, the sway of the Roman Catholic priesthood, in spite of every effort which they are making, can never be restored in this country.—*Letter from Prague.*

THE PRUSSIAN GYMNASIA.—These public schools are the only seminaries in Prussia which are empowered to grant to their pupils certificates of admission into the universities of that kingdom. All other young men, who are desirous of entering the latter, must undergo an examination in their classical attainments, before a University Board of Examiners, previously to their being admitted to matriculate. The state of these gymnasia appears, by an official return recently published, to have been as follows at the beginning of the winter session, 1830-1831:—

In Prussia Proper, 12 gymnasia, 3197 pupils: (of these there are four at Königsberg, and two at Dantzig.)

In the Duchy of Posen, 3 *gymnasia*, 1063 pupils: (viz. two at Posen, and one at Bromberg.)

In Brandenburg and Pomerania, 23 *gymnasia*, 5752 pupils: (of these there are five at Berlin, one at Frankfort on the Oder, one at Stettin, one at the University of Greifswald, and one at Stralsund.)

In Silesia and Prussian Saxony, 43 *gymnasia*, 9054 pupils: (amongst which there are four at Breslau, two at Magdeburg, and two at Halle.)

In Westphalia and the Rhenish Provinces, 28 *gymnasia*, 4701 pupils: (of which there are two at Cologne, one at Bonn, at Düsseldorf, Coblenz, Treves and Aix-la-Chapelle, Münster, and Minden.)

The total number of these schools is, therefore, 109; and that of their pupils, 23,767.

**BRESLAU.**—We observe, by the official return of the number of students at this University, during the summer term of the present year, that they amounted to 1114; namely, 281 following the courses in theology, according to the Reformed Church; 245 following those in conformity with Roman Catholicism; 316 studying jurisprudence; 114 medicine; 9 rural and political economy, and 149 philosophy and philology. This enumeration does not extend to numbers who have not taken out their matriculation, but frequent the several courses of lectures.

**BERLIN, AUGUST 3.**—The birth-day of our enlightened monarch was celebrated this day, by a solemn act in the great theatre of the University Building. It commenced at noon, by the performance of a Latin hymn, with instrumental accompaniments. To this succeeded a Latin oration, by Professor Bückh, the rector for the time being, in which he dwelt upon the power and security arising out of the reciprocal affection which should subsist between the sovereign and his subjects, and passed a merited eulogy on the beneficent sway of his Prussian Majesty. Professor Toecken then read a list of the awards which had been made with respect to the prize-essays sent in by the students, and announced the several subjects prescribed for competition in the year ensuing. The ceremony closed with the performance of a second hymn.

**RHENO-PRUSSIA—NATIONAL SCHOOLS.**—The official journal for the circle of Düsseldorf, which forms, with the circle of Cologne, the province of Cleves and Berg, and contains a population exceeding 700,000 souls, affords a very gratifying proof of the diffusion of the means of elementary instruction in that quarter. It appears, that during the year 1830, 34 new schools, and 4 residences for masters had been built, and 256 schools and 40 similar residences had undergone repairs. The voluntary donations towards this benevolent purpose had amounted to a sum of 4955 rix-dollars (745*l.* sterling) for that year, which was 400*l.* more than what had been contributed in 1829.

**FRANKFORT.**—Professor Cousin, in the report which he has published of the result of his inquiries into the state of public instruction in northern Germany, observes, when speaking of Frankfort, that ‘this city possesses no school for university education; instruction ceases at what, with us, constitutes the second step,

namely, the class of instruction given in our colleges, or in the German Gymnasia. It is true, there are several scientific and literary institutions in this city, but they are of a description which, in France, are not within the jurisdiction of the Minister of Public Instruction.' They consist of the Institute for Natural History and Physic, which is partly connected with the Society of Natural History; the Institute for the Art of Design, founded in 1799, and organized, by a decree of the senate, on the 10th of February, 1829 ; the Society of Arts (*Kunst Institut*), originating in Schaeldel's bequest, 13th of March, 1813 ; the Society of Natural History (*die Natur-forschende Gesellschaft*), founded the 22d of November, 1817, and comprising a museum of natural history ; the Society of Physics, established for promoting the study of physics and chemistry, on the 24th of October, 1824, with which a cabinet of physics, and prelections on the most recent discoveries, are combined ; and lastly, the Society for diffusing the Useful Arts, together with the sciences subservient to them, founded in 1816, and under the direction of a president and eight assistants. This society has instituted a Sunday-school for artisans, with gratuitous instruction, and a School of Trades, dating from the year 1828, where evening lessons in linear design, writing, arithmetic, geometry, and formation of style are given. The Schools for the People (*Volks-schulen*) have this peculiar characteristic, that the children of distinct faiths have distinct schools—a circumstance which does not attach to the Gymnasium. In this way, there is a Jew's school, founded and conducted wholly by Jews; several Catholic schools, under the direction of the Board for Catholic Seminaries and Churches ; two schools for boys—the one adjoining the church of St. Mary, and the other near the cathedral ; two girls' schools, one of which is specifically appropriated to English females; and three Protestant schools, on each of which the town annually expends 170*l.* These three establishments contain nearly seven hundred children of both sexes. Every child pays a fee of 10 florins (about 22*s.*), and provision is made for the reception of indigent pupils, by means of charitable contributions, so that there is scarcely a child in the town to whom some sort of education is not afforded. Between the Gymnasium and these popular schools there is a species of intermediate seminary (*Mittel Schule*), for boys and girls, where instruction of a somewhat superior description is given. Every boy pays twenty florins (about 44*s.*) per annum, without, and twenty-five (about 56*s.*) with, lessons in the French language ; the girls pay five florins more for being taught such works as are peculiar to their own sex. This institution has met with great success, and contains two hundred and fifty boys, and the same number of girls. It is divided into four classes for each sex, but none of them can be carried beyond a certain number—an arrangement which is not only wise, but highly conducive to the maintenance of good discipline, and the better instruction of each individual pupil.

AUSTRIA.—The groundwork for elementary instruction among the common people was laid in this country (says a Vienna correspon-

dent) at a much earlier day than in most of the European states. At the commencement of the preceding century, there were not more than three children in twenty who enjoyed the advantage of public education; whereas, at the present moment, their numbers are equal to two thirds of all the young persons who are susceptible of instruction. Of this class, there are two millions of individuals in the Austrian states, exclusive of Hungary; and out of these two millions there are nearly one million and a half on the books of the national schools. Deducting the fifteen hundred schools of industry, and girls' schools, as well as the eight thousand supplementary schools (*Wieder-hohlungs Schulen*) which exist in the Hungarian provinces, there are altogether *thirteen thousand* elementary and superior schools, the average result of which is, that there is one school to every two hundred and seventy-five families, or to every one hundred and sixty-seven children, and the proportion is constantly diminishing. In Austria Proper, there is not more than one child in thirty, and in Moravia and Bohemia not more than one in twelve or thirteen, of such children as are fitted to receive instruction, who is not a pupil in those schools; but in Gallicia, Illyria, and the Veneto-Lombardic provinces, the number is confined to two out of three. This last circumstance originates in the difficulty of finding the requisite funds, no less than in the want of disposition which exists on the part of the parent to educate his children. The government is earnestly engaged in removing the first of these impediments, and so much so, that in the year 1824 alone, forty-nine superior seminaries were opened in Lombardy, and six-and-thirty national schools in the Venetian states.

WÜRZBURG.—Our University has never ceased to flourish, even whilst under episcopal dominion, when the censorship of the press was at its zenith. It rose to its highest splendour when placed for a while under the Bavarian sceptre, in 1803, but declined in a remarkable manner after it became the seat of a grand duchy, when the greater portion of those who had raised it into fame, sought some other scene for their labours. It has recovered slowly since its restoration to a Bavarian sovereign, and has begun to make swifter progress since the commencement of the present reign: for this it stands indebted to such men as Behr, Seufert, Brendel, Wagner, and Cukumus, whose exertions fairly entitle them to some share of the favouritism which is lavished upon Munich. A spirit of scientific inquiry, directed by rational and liberal views, has long been the characteristic of our schools; this has even extended to the monkish confraternity, one of whom, the indefatigable Blank, was the father of our Museum and Cabinet of Natural History, which are excellent in their class. We also possess an admirably selected library of 120,000 volumes, which has been enriched by the munificence of the Prince-Primate Von Dalberg, as well as from the libraries of the suppressed monasteries. The present reputation of this university is, however, mainly attributable to the excellence of its medical establishment, which is extremely well supplied with "teachers in all its branches, and by means of an exten-

sive and admirably conducted hospital (the Julius Hospital), enables theory to travel hand in hand with practice. This department of the University is indisputably better endowed, with respect to the range of professional appointments, than any other. At the head of them stand Heusinger, one of the first physiologists and anatomists in Germany; D'Outrepont, a man of distinguished eminence in the obstetric art; Textor, who is one of the clearest demonstrators that ever lectured on the principles or exhibited the practice of surgery; and last, though by no means least, Schönlein, the able conductor and expositor of clinics in the Julius hospital. This latter institution owes its existence to the Prince-Primate Julius, who was justly called 'the Father of his People,' and in the year 1582 raised the University into note by his judicious reforms and splendid benefactions. Before his time, and during the century and a half which had elapsed from its foundation, Würzburg was a mere seminary for Catholic theology and polemics. It is still the favoured high school of the south of Germany for Roman Catholic students, but the character of its pupils is, notwithstanding, of a freer cast than that of its sister universities in Bavaria.—(*From a Correspondent.*)

BONN.—The number of students at this University during the winter half-year, 1830—1831, was 865, of whom 116 matriculated in Protestant, and 271 in Catholic, theology, 231 in jurisprudence, 134 in medicine, and 112 in philosophy.

SWITZERLAND.—The general annual meeting of Swiss scholars, of whom two hundred were present, was held at Zoffingen, in the canton of Aarau, on the 5th and 6th of August last. They met in a hall forming part of the Guildhall; it was embellished with the armorial bearings of the twenty-two cantons, and a lady of the town presented the meeting with an altar, which was placed before the president's chair. On the top of this altar stood a trunk of an old tree, from which sprung a sapling, which bore the coats of arms of the several cantons, and in the centre of them the cross of the Swiss confederation was introduced. At the foot of the sapling was a figure of a young woman praying for the prosperity of Switzerland.

### GREECE.

SYRA.—In June last, there were two schools in this island; the one for boys, the other for girls. The expense of them is wholly defrayed by the town itself. The teachers are moderately competent for their task; and the number of children whom they have under their care, varies from three hundred to three hundred and fifty.

### POLAND.

WARSAW, AUGUST 10.—The Council of this university have opened competitions for the vacant chairs of Mineralogy and the Classics. The candidates are required to send in, on or before the 1st of June

next, for the former, a view of the whole course of Mineralogy in Polish, and for the latter, an explanatory comment on the thirty-third and four following books of Pliny's Natural History, in Latin. No persons will be admitted as candidates who have not taken a doctor's degree. An annual salary of six thousand Polish florins (about 130*l.*) is attached to both appointments.

### RUSSIA.

**BESSARABIA.**—The Emperor Nicholas has directed, that all the public seminaries in this province should be severed from the jurisdiction of the University of Kharkof, and placed under that of the Richelieu lyceum and curator of public schools at Odessa.

### SICILY.

**THE UNIVERSITY OF PALERMO.**—This school is numerously attended, but has slender claims to respect from the scholar or man of science. The Abbate Ferrara, who is accounted a model of learning throughout Sicily, and by the natives the most erudite personage in the literary hemisphere, collects a crowded auditory at his lectures on chemistry and mineralogy, which he delivers, in the same hall where, but a few minutes before, the theological course has been given. Reclining in the chair of divinity, Ferrara delivers his dicta on bases, acids, re-agents, analyses, and precipitates, independently of the aid of chemical apparatus, or the illustration of one isolated experiment. It was amusing enough to see his pupils gazing, with open mouths of astonishment, as he dwelt upon his possessing the means of converting black into white. Every countenance looked as if the owner sighed for the opportunity of witnessing a practical exhibition of the miracle. And this is nothing more than a fair specimen of the state and condition of other branches of science in this university. Professor O\*\*\* had commissioned me to purchase every work in Natural History, which had appeared in Sicily during the last thirty years, and I took occasion to consult with the learned Abbate on the subject. After one of his lectures, therefore, and before his numerous auditory had dispersed, he recapitulated, with much pomp of enunciation, the titles of thirteen publications, which had emanated from his own pen. The greater part of them, as I afterwards found upon searching for them at Naples, were mere pamphlets, and those of a very insignificant description. I had previously ransacked the stores of every bibliopolist in Palermo, but could not meet with a single page of the boasted thirteen, save and except the 'Guida de' Viaggiatori in Sicilia!' Indeed my whole literary harvest from this classic soil was limited to a stray number of a periodical, in which Cocco, a young man of considerable attainments in Messina, has described sixteen new varieties of fishes. As for mass-books and works of devotion, it was my own fault that I did not bring a ship-load away with me.—  
**J. B.**

## SPAIN.

IN the year 1806, there were two and twenty universities in Spain, which have lately been reduced to sixteen. Of these, three are styled ‘Mayores,’ namely, those of Salamanca, Valladolid, and Alcalá; and the remainder, ‘Minores,’ to wit, those of Valencia, Cervera, Saragoza, Granada, Seville, Oviedo, Santiago, Huesca, Majorca, Orihuela, Ossuna, and Onate. If the number of schools of science and learning were the measure of a country’s mind, Spain ought to be the best informed region in Europe, for she possesses a University to every eight hundred thousand inhabitants. But they are wretchedly endowed; and some of their professors, such as the lecturers on mathematics and philosophy, do not receive more than *four pounds* a year! Salamanca forms the only exception, and there they are in general well paid. Numbers of them contrive to subsist on *five and twenty* pounds per annum; and a scholar who holds a chair which produces from *forty* to *fifty*, ranks among the favourites of fortune. The professor has, therefore, no earthly motive for exertion in his academical capacity, and endeavours to obtain some second or third appointment, the functions of which are entirely foreign to his university duties. Even at Salamanca, his principal object in accepting a chair is to render the reputation which he may acquire whilst filling it, a means of recommending himself to some official station.

In almost every town in Spain there are salaried schoolmasters, who are employed in giving instruction to the children of the poor; and schools, having a similar object in view, are attached to many of the monasteries. The range of study is limited to reading, writing, the elementary principles of arithmetic, and the catechism.

## THE UNITED STATES,

Whose population has increased from *seven* millions, in the year 1810, to *fourteen*, at the present moment, contain 19,000 places of divine worship, or one to every 737 souls, 43 colleges, or lyceums; 30 libraries attached to these colleges, containing 128,118 volumes; and 25 other libraries, possessing 66,730 volumes, in various departments of science and literature. The number of theological seminaries is twenty, and connected with them are as many libraries, which are supplied with 40,000 volumes.

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## B R I T I S H.

LONDON UNIVERSITY.—On Wednesday, the 13th of July, a meeting was held for the distribution of prizes and honours in the following classes; the successful competitors received their prizes from the hands of the Chairman, Lord Ebrington:—

**LATIN.—SENIOR DIVISION.**—*First Certificate and First Prize*—William Dougal Christie, of London. *Second Certificate and Second Prize*—John Woolley, of Brompton, Middlesex. **JUNIOR DIVISION.**—*First Certificate and highest Prize*—Alexander Chisholm Gooden, of London. *Second Certificate and Second Prize*—W. G. Pennington, of Clapham Common.

**GREEK.—SENIOR DIVISION.**—*First Certificate and highest Prize*—William Dougal Christie, of London. *Second Certificate and Second Prize*—John Woolley, of Brompton, Middlesex. **JUNIOR DIVISION.**—*First Certificate and highest Prize*—Alexander Chisholm Gooden, of London. *Second Certificate and Second Prize*—W. G. Pennington, of Clapham Common.

**SENIOR MATHEMATICS.—HIGHER DIVISION**—*First Certificate and Prize*—William Aldam, jun. of Leeds. **LOWER DIVISION.—First Certificate and Prize**—W. D. Christie, of London.

**JUNIOR MATHEMATICS.—HIGHER DIVISION**—*First Certificate and highest Prize*—Robert Fawcus, of London. *Second Certificate and Second Prize*—Henry Warwick Cole, of London. **LOWER DIVISION—First Certificate and Prize**—William Conway, of Kennington Common.

**NATURAL PHILOSOPHY.—First Certificate and highest Prize**—J. S. Chance, of Birmingham. *Second Certificate and Second Prize*—William Aldam, jun. of Leeds.

**RHETORIC.—SENIOR CLASS.—First Certificate and Prize**—Charles Z. Macaulay, of London. **JUNIOR CLASS—First Certificate and Prize**—John Hedderwick, of London.

**ENGLISH PHILOLOGY.—First Certificate and Prize**—James Thompson, of London.

**PHILOSOPHY OF THE MIND AND LOGIC.—First Certificate and highest Prize**—Frederick Lucas, of Wandsworth. *Second Certificate and Second Prize*—Richard Baxter, of Manchester. Augustus Abraham, of London, and Henry Warwick Cole, also received *First and Second Certificates and Prizes* for Diligence, Ability, and general Excellence.

**FRENCH.—SENIOR DIVISION.—First Certificate and Prize**—R. H. Semple, of London. **JUNIOR DIVISION.—First Certificate and Prize**—Lord Leicester.

**ENGLISH LAW.—First Certificate and highest Prize**—Edward Hall, jun. of Newcastle-upon Tyne. *Second Certificate and Second Prize*—Henry Udall, of the Inner Temple. *Third Certificate and Third Prize*—Thomas Hare, of the Inner Temple.

**BOTANY.—First Certificate and Prize**—Joseph Douglas, of Bushey, Herts.

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**NAVAL AND MILITARY LIBRARY AND MUSEUM.**—This institution, which has been recently established in London, with the view of improving the scientific character of the naval and military professions, bids fair to prove eminently successful. His Majesty has been graciously pleased to extend his patronage to it, and the Duke of Wellington has been elected Vice-Patron. The establishment of

the institution has been forwarded by the most distinguished officers in the naval and military service, and with so much effect, that within three weeks after issuing the prospectus, a list of 735 subscribers was sent in.

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**EDUCATION OF THE WORKING CLASSES.**—A very numerous meeting of the working classes residing in the Tower Hamlets, took place on the 12th of July, in the grounds of the Ben Jonson public-house, at Stepney, to consider the best means of establishing ‘Societies for the Promotion of Public Instruction.’ Mr. D. Saul, Fellow of the Geological and Astronomical Societies of London, was called to the chair. Mr. Hume, M.P. addressed the meeting at some length, expressing his hope to see the day when the state, like America and other countries, would make a proper provision for educating every child; but, at present, he recommended the formation of such societies as those now proposed, as a means of diffusing a general and useful knowledge, and of bettering the condition of the labouring classes. Several resolutions were then passed, and a collection made for the purpose of carrying the object of the meeting into effect.

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**MESSRS. SMITH AND DOLIER.**—In the last Number of this Journal there appeared a review of one of Messrs. Smith and Dolier’s publications, which, in the opinion of the reviewer, possessed considerable merit. Some remarks were also incidentally made, in the same article, on Messrs. Smith and Dolier’s various inventions for facilitating the acquisition of knowledge. As these remarks appear to some to convey a general and sweeping censure, we take this opportunity of saying, that such a kind of censure was not intended, either with respect to Messrs. Smith and Dolier’s past or future inventions. We shall endeavour, at some convenient time, to describe particularly the various inventions alluded to, and accompany the description with such remarks as we shall believe to be fair and true.

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**BRISTOL COLLEGE.**—The Rev. W. D. Conybeare, Visitor of Bristol College, has lately delivered an inaugural discourse at that institution, introductory to a series of Theological Lectures for the use of the pupils. The subject of the address is the application of classical and scientific education to Theology, and is treated with much learning, ingenuity, and elegance.

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**WORCESTER.**—The Mechanics’ Institute, which was founded by Dr. Corbet, about three years ago, is now entirely out of debt, and in far more flourishing circumstances than ever. Its career has not been brilliant (for there has been no extraordinary expense), but it has been sure. What has ruined four-fifths of similar institutions is, getting involved in debt: making a very brilliant commencement, they get embarrassed, and every one’s zeal is cooled.

**LEEDS SCHOOL OF MEDICINE.**—A School of Medicine has been established at Leeds, and is to open on the 25th of October. Several respectable physicians and surgeons have undertaken to deliver courses of lectures, for the benefit of students.

**DISSENTERS' SCHOOL.**—At Silcoats, near Wakefield, in Yorkshire, an institution has been established for the purpose of providing an adequate education, at a cheap rate, for the sons of Dissenting Ministers, of the Independent denomination, in Yorkshire and Lancashire. The head master, who has been recently appointed, is the Rev. Ebenezer Miller, A.M. of the University of Glasgow, and formerly classical tutor of the Blackburn Independent College.

**BOTANY.**—A Botanic Garden has been established at Manchester, and is already so far advanced as to afford great facilities for extending improved varieties of culinary vegetables and fruits, and for the education of a superior description of gardeners. The gentlemen of the neighbourhood have been most liberal in their support of this establishment, to which very considerable donations of trees, plants, and books have been made.

**MILITIA SCHOOL.**—In the Cavan Militia a school is established for the education of soldiers' sons. They are taught to read and write, and the common rules of arithmetic: they are instructed in the principles of the Christian religion, and the duties of morality; are paraded with the men every Sunday, and marched with them to their respective places of worship. On Saturday the master has the boys prepared for examination, and any officer who chooses to attend may examine them. They are furnished with a leather cap, a jacket, and two pairs of cloth trousers annually. The expense of this establishment is defrayed by a very trifling subscription among the officers, in the following proportions:—field-officers, 8s. per month; captains, 6s.; lieutenants, 3s.; ensigns, 2s.; and with this slender fund they are enabled to clothe and educate forty boys.

**SCOTTISH UNIVERSITIES.**—The following is the number of degrees granted by the Scottish Universities for the last thirty-one years:—

		D.D.	L.L.D.	A.M.	M.D.
Edinburgh	.	46	27	199	2524
Glasgow	.	87	72	760	654
St. Andrew's	.	69	6	59	649
Aberdeen	.	26	59	740	286
Marischal	.	51	50	881	282

*Glasgow Chronicle.*

**EXPENSE OF PRINTING A BOOK.**—The taxes on books consist of the duties on paper and advertisements, and the eleven copies given to public libraries. The first are as follow:—

	£ s. d.
First-class paper (including all printing paper)	0 0 3 per lb.
Second ditto . . . . .	0 0 1½ per lb.
Glazed paper, millboard, &c. . . . .	1 1 0 per cwt.
Pasteboard, first class . . . . .	1 8 0 ditto.
Ditto, second class . . . . .	0 14 0 ditto.

These duties produced last year (1830) 665,872*l.* 5*s.* 8½*d.* of net revenue. The regulations and penalties under which they are charged and collected are about the most complicated, vexatious, and oppressive of any in the excise-laws. On an average, the duties amount to from 20 to 30 per cent. of the cost of the paper and pasteboard used in the printing and boarding of books. Heavy, however, as these duties certainly are, they are light compared with those laid on advertisements. A duty of 3*s.* 6*d.* is charged on every advertisement, long or short, inserted in the Gazette, or in any newspaper, or any work published in numbers or parts; and as the charge, exclusive of duty, for inserting an advertisement of the ordinary length in the newspapers, rarely exceeds 3*s.* or 4*s.*, the duty adds fully 100 per cent. to its cost. And as it is quite as necessary to the sale of a work that it should be advertised as that it should be printed, the advertisement duty may be justly regarded as an *ad valorem* duty of 100 per cent. on the material of a most important manufacture. Had this duty furnished a large revenue, something might have been found to say in its favour; but even this poor apology for oppressive exaction cannot be urged in its behalf. It is exorbitant without being productive. Last year (1830) it produced 157,482*l.* 7*s.* 4*d.* in Great Britain, and 16,337*l.* 14*s.* in Ireland, making together 173,821*l.* 1*s.* 4*d.*, of which miserable pittance we believe we may safely affirm, a *full third* was derived from advertisements of books.

But the real operation of the duties on books will be best learned from the following statements, to which we invite the attention of our readers. They have been drawn up by the first practical authority in London, and the fullest reliance may be placed on their correctness. They refer to an octavo volume of 500 pages, printed on respectable paper, to be sold by retail for 12*s.* a copy.

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**ERRATA.**

- Page 284, line 29, *for 'urged,' read 'used.'*  
Page 284, last line, *for 'two,' read 'these.'*  
Page 287, first line, *for 'observations,' read 'operations.'*  
Page 289, line 4, *insert 'a more' after 'is.'*  
Page 290, line 16, *for 'action,' read 'notion.'*  
Page 290, fourth line from bottom, *for 'thing,' read 'theory.'*

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